Fig.1B

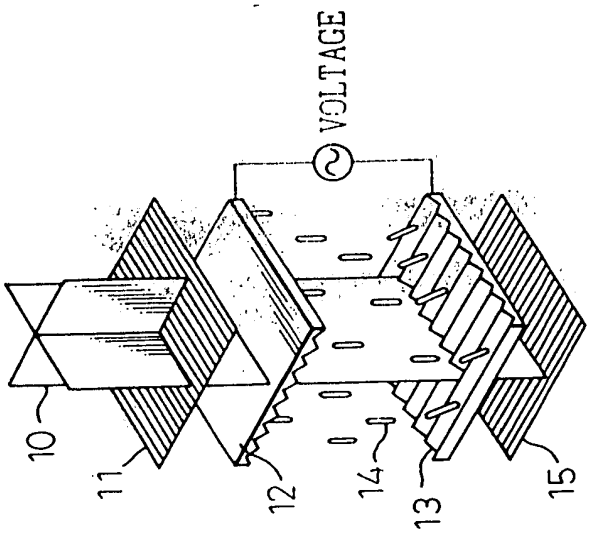


Fig.1A

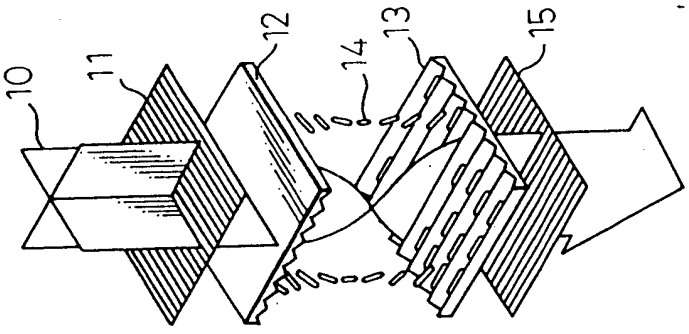


Fig.2C

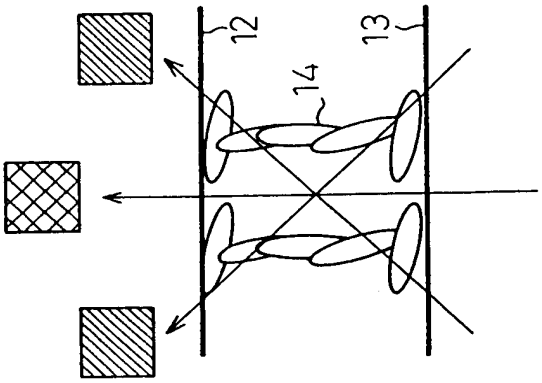


Fig.2B

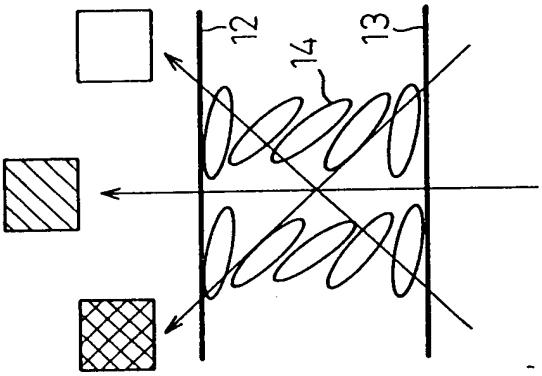


Fig.2A

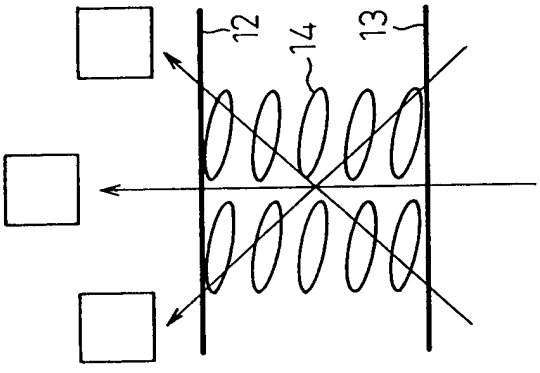


Fig.3A

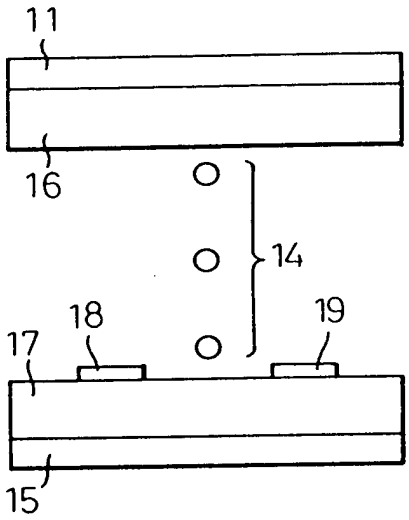


Fig.3C

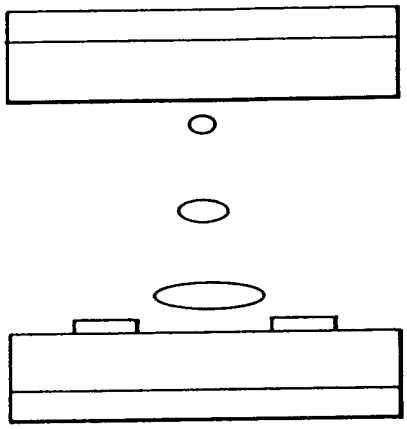


Fig.3B

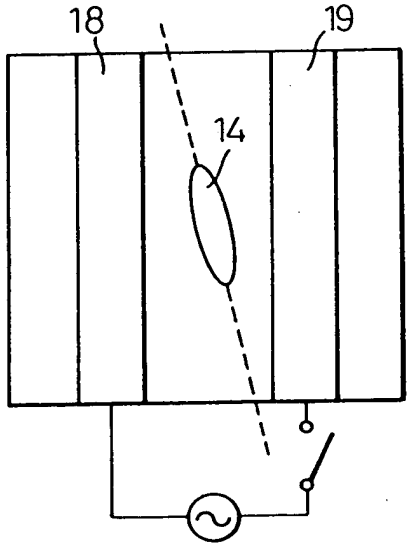


Fig.3D

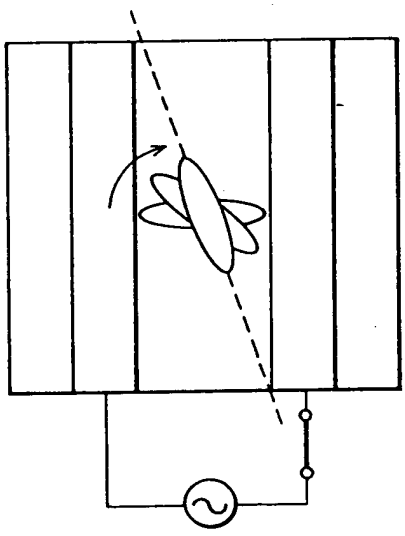


Fig.4

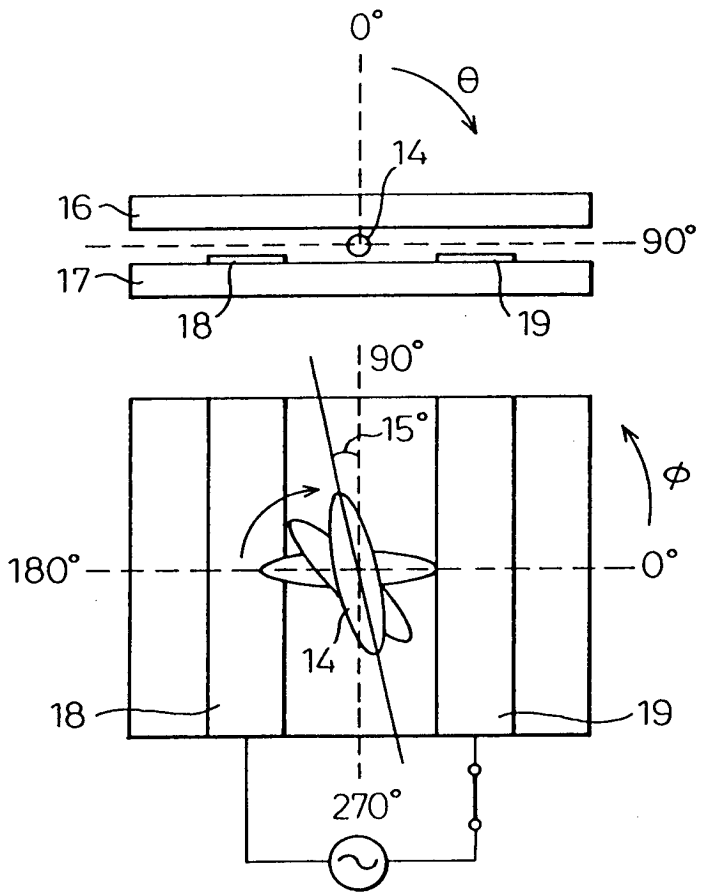


Fig. 5

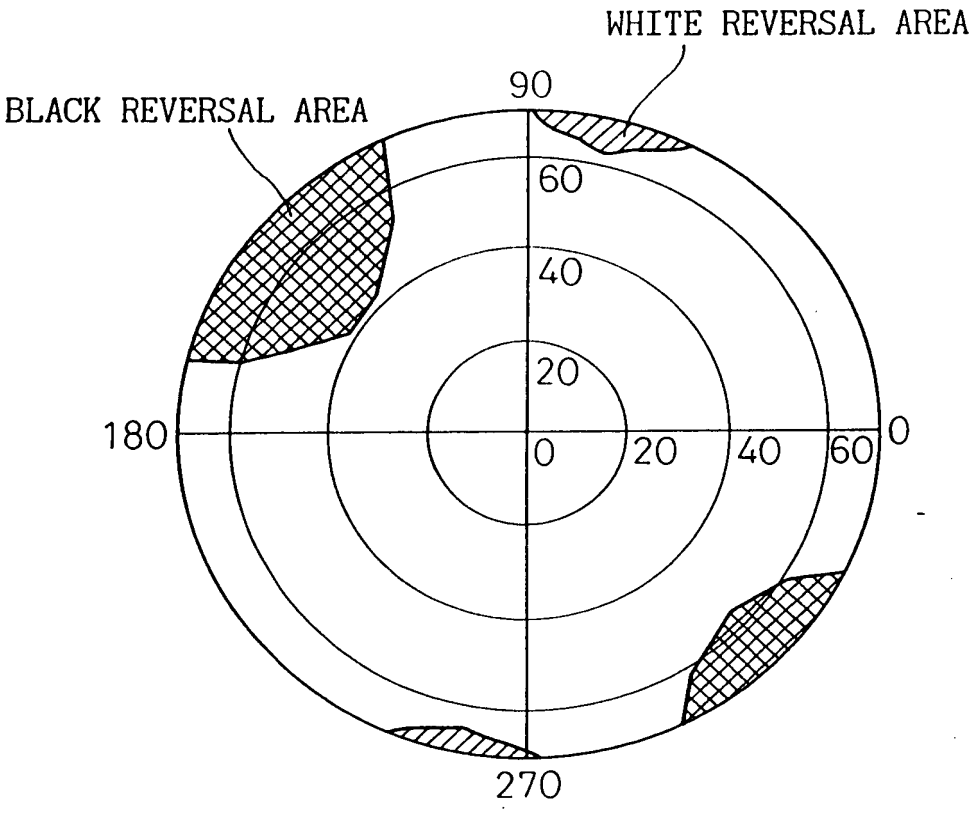

WHITE REVERSAL AREA
BLACK REVERSAL AREA
90
60
40
20
180
0
0
20
40
60
270

Fig.6A

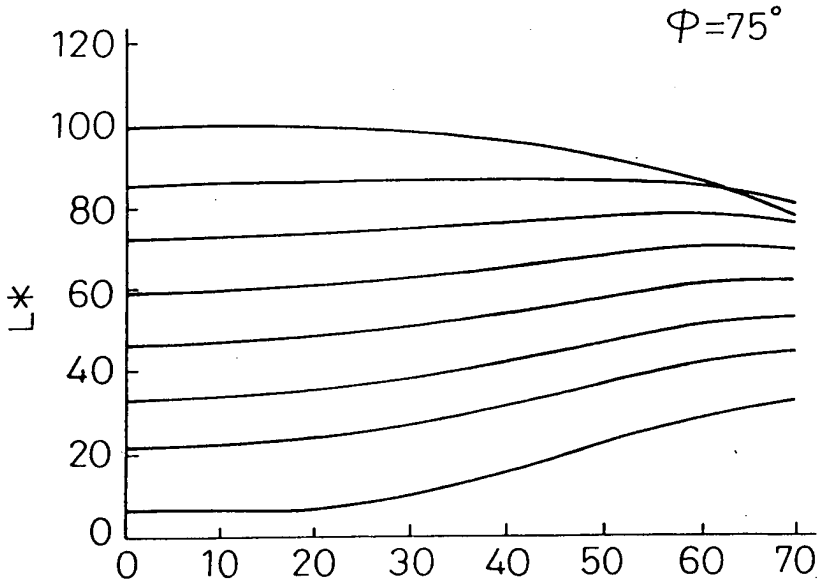

φ=75°
120
100
80
60
40
20
0
L*
0
10
20
30
40
50
60
70

Fig.6B

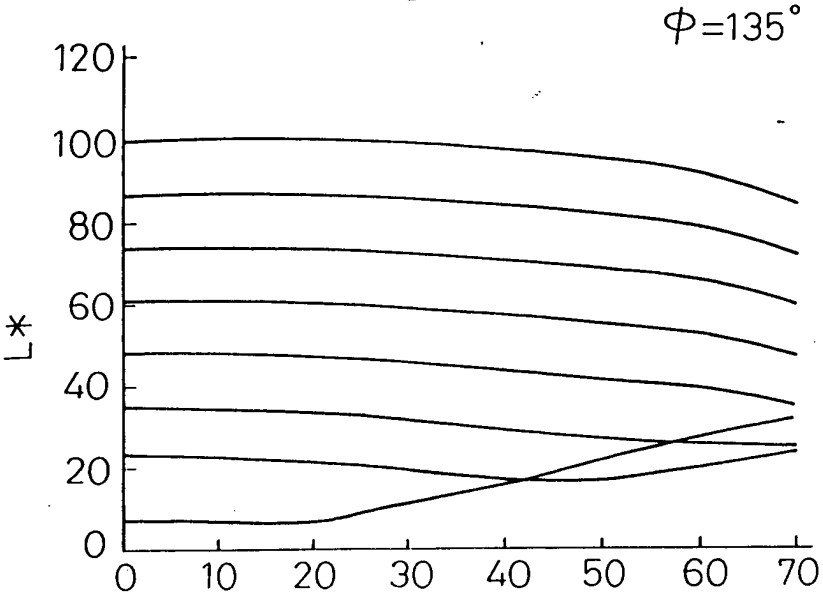

φ=135°
120
100
80
60
40
20
0
L*
0
10
20
30
40
50
60
70

Fig.7A

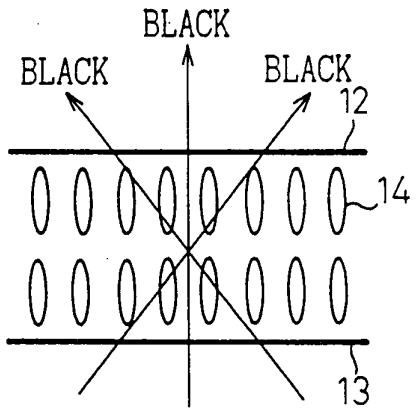


Fig.7B

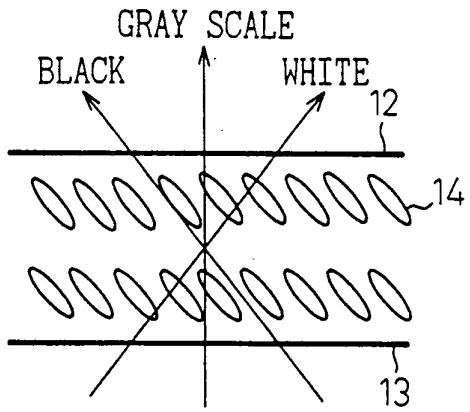


Fig.7C

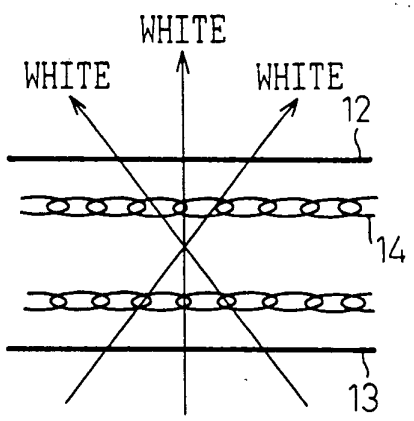


Fig.8A

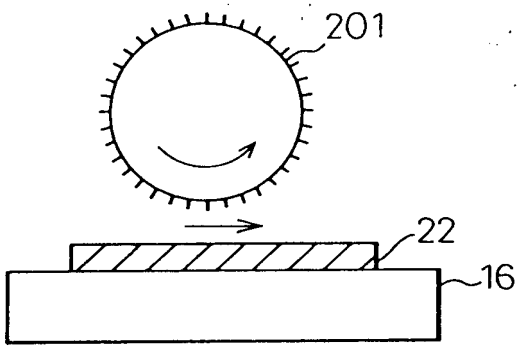


Fig.8B

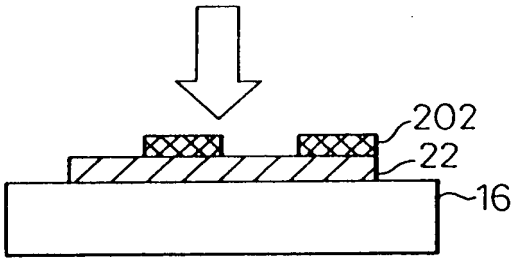


Fig.8C

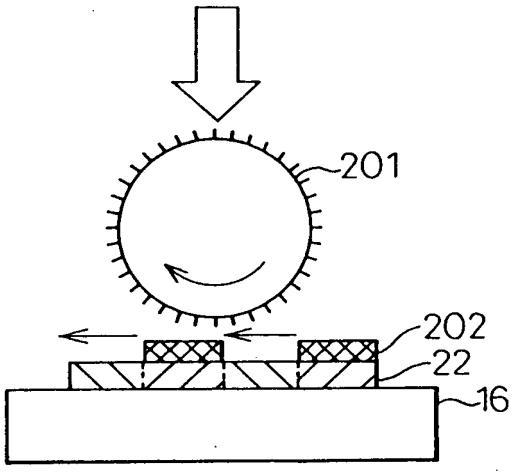


Fig.9A

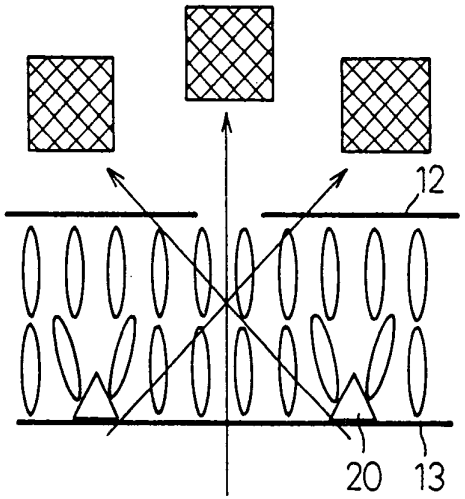


Fig.9B

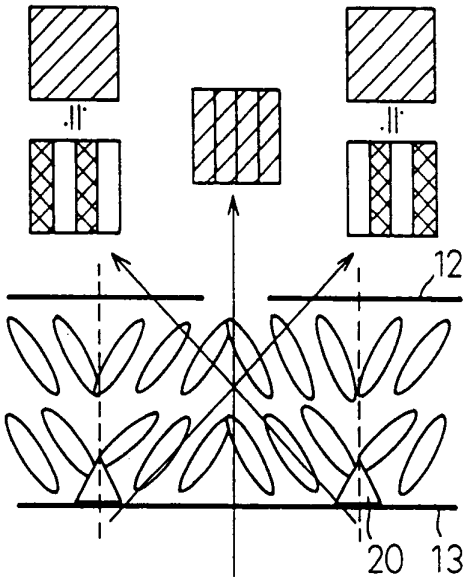


Fig.9C

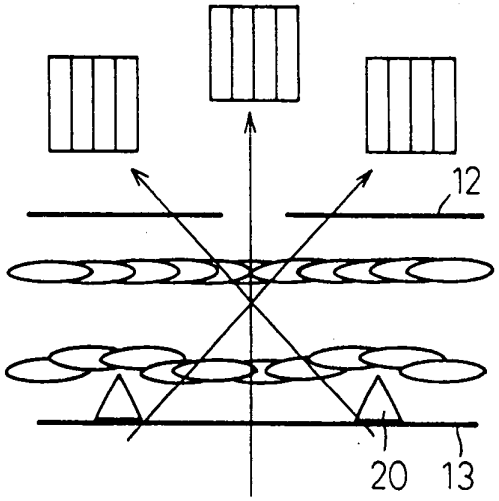


Fig.10A

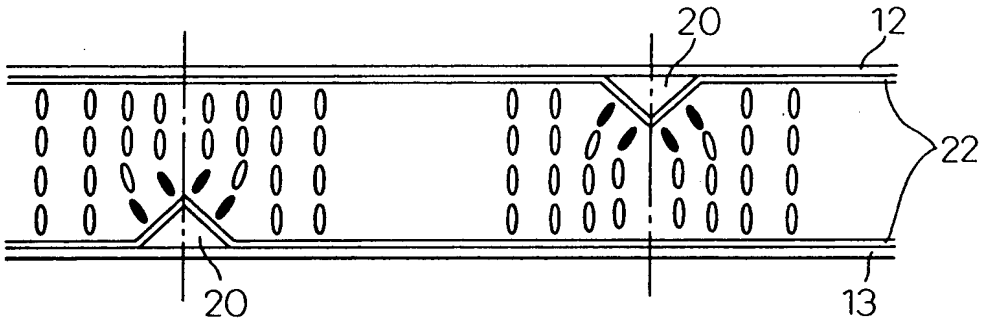


Fig.10B

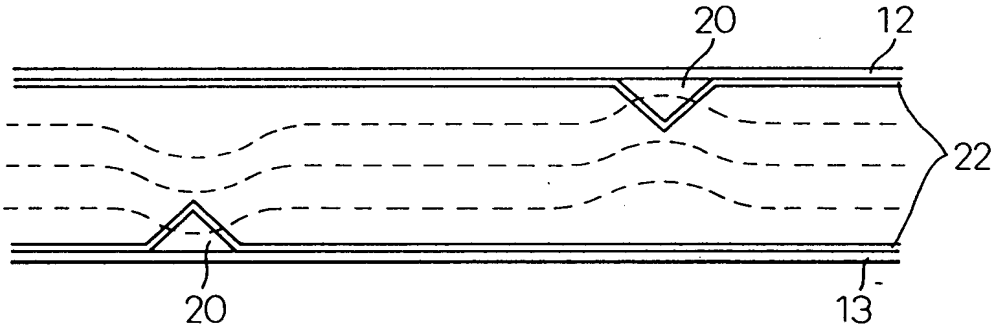


Fig.10C

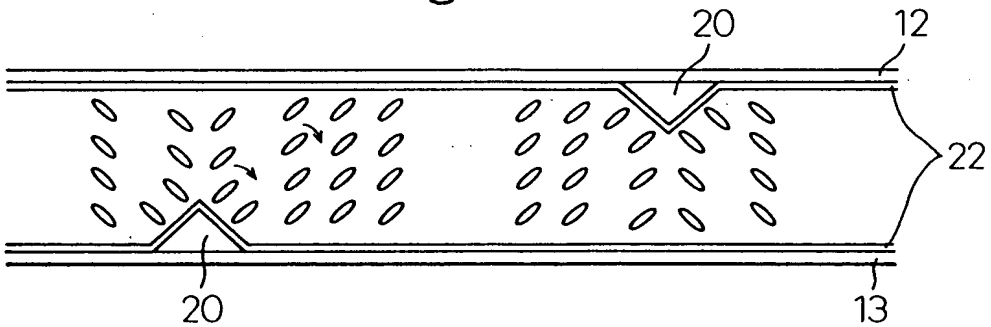


Fig.11A

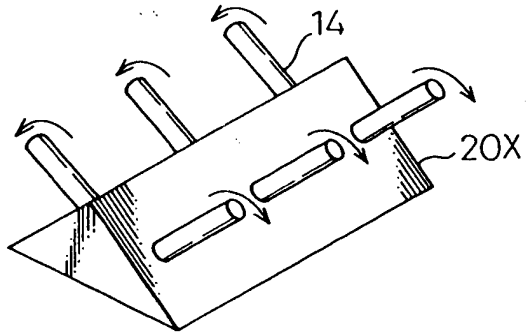


Fig.11B

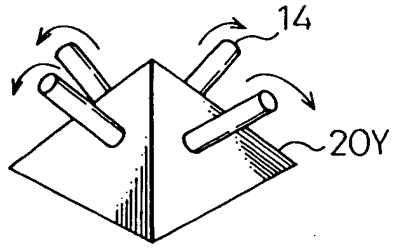


Fig.11C

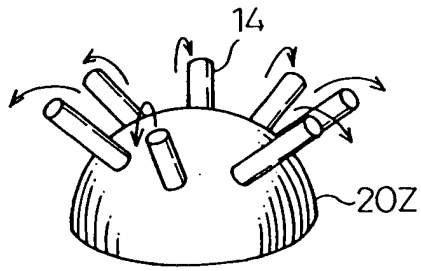


Fig.12A

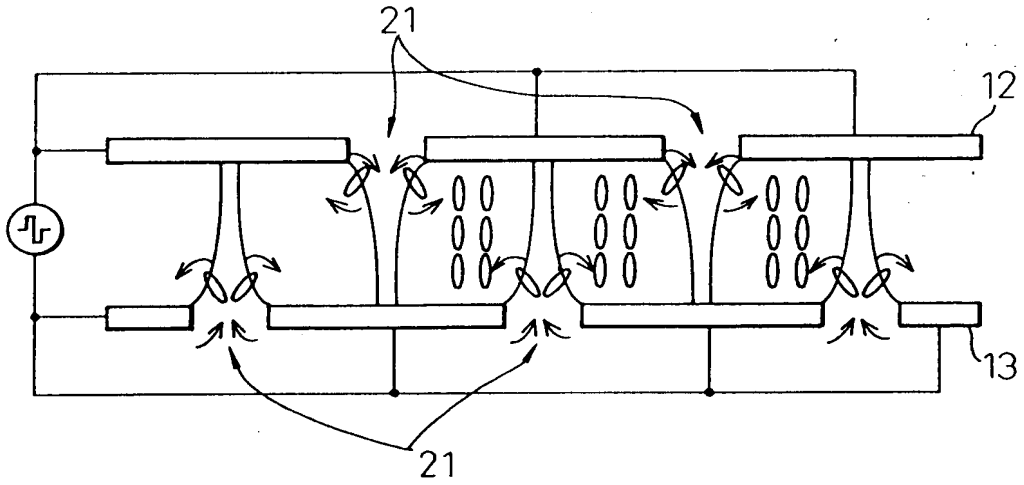


Fig.12B

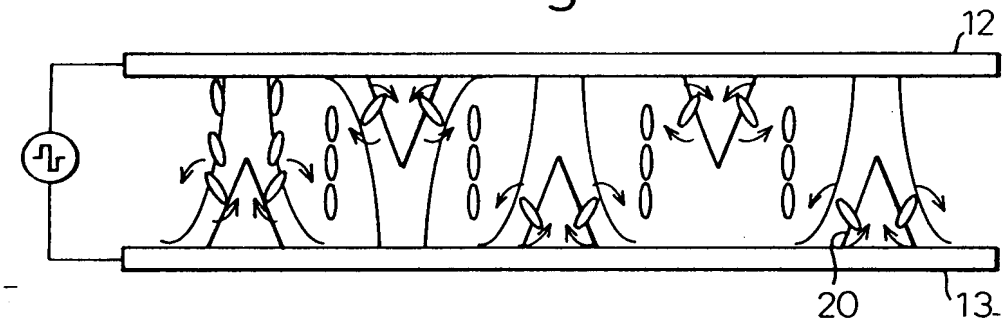


Fig.12C

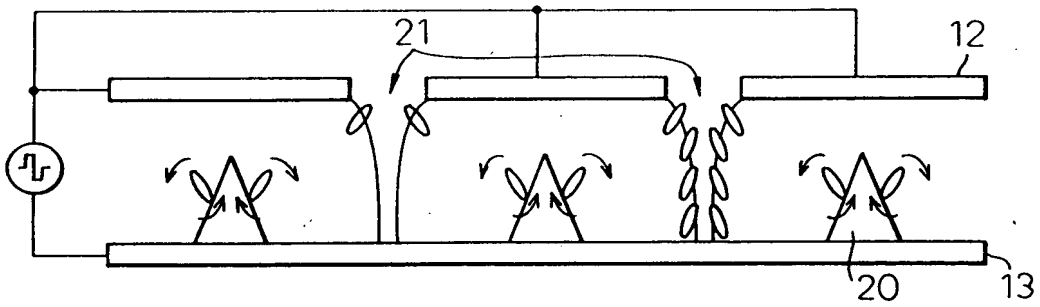


Fig.13

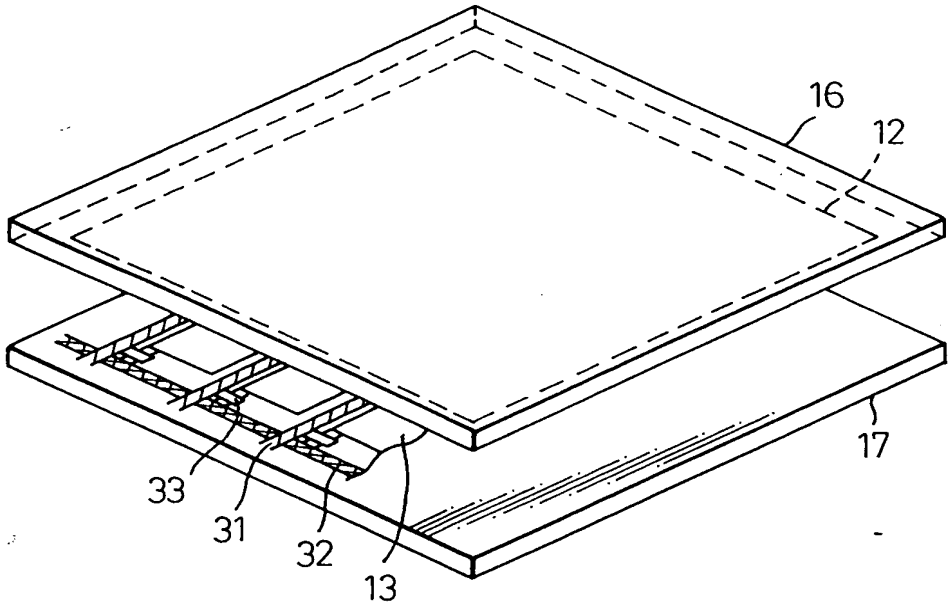


Fig.14A

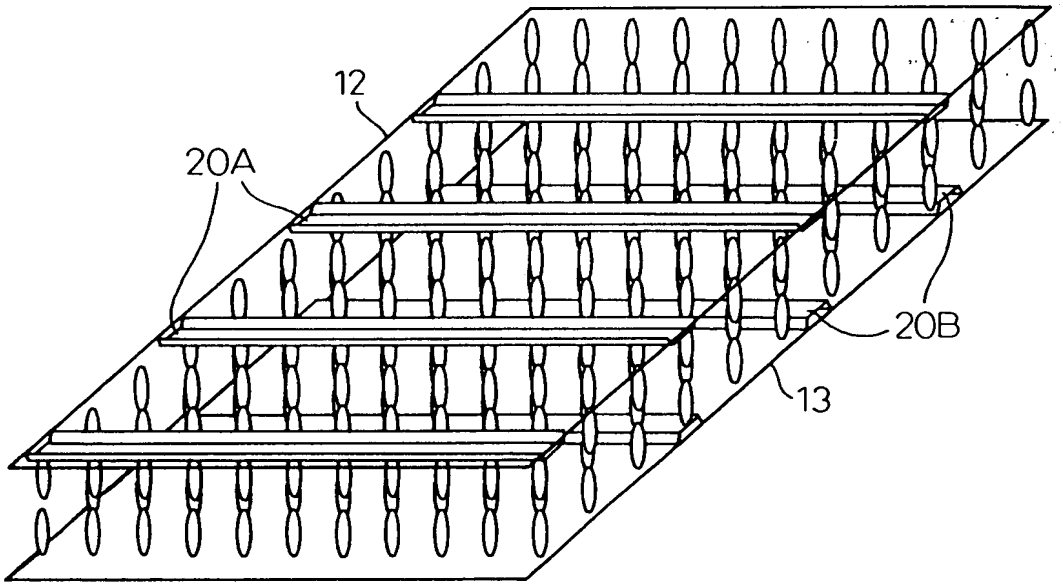


Fig.14B

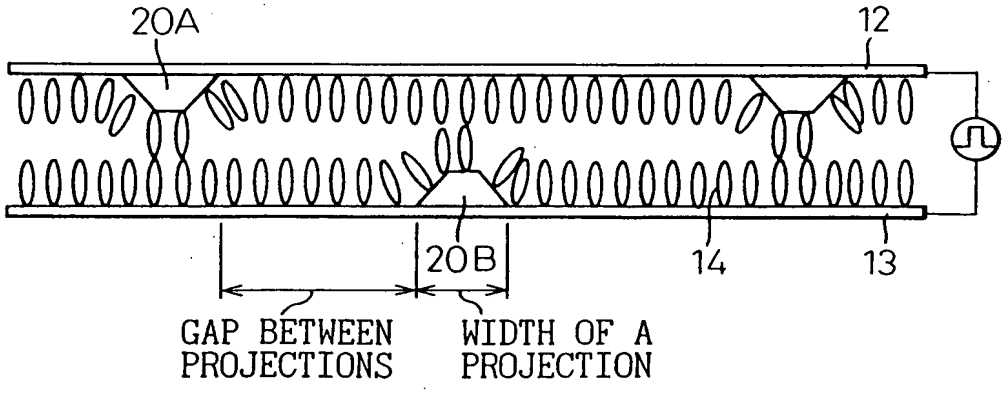


Fig.15

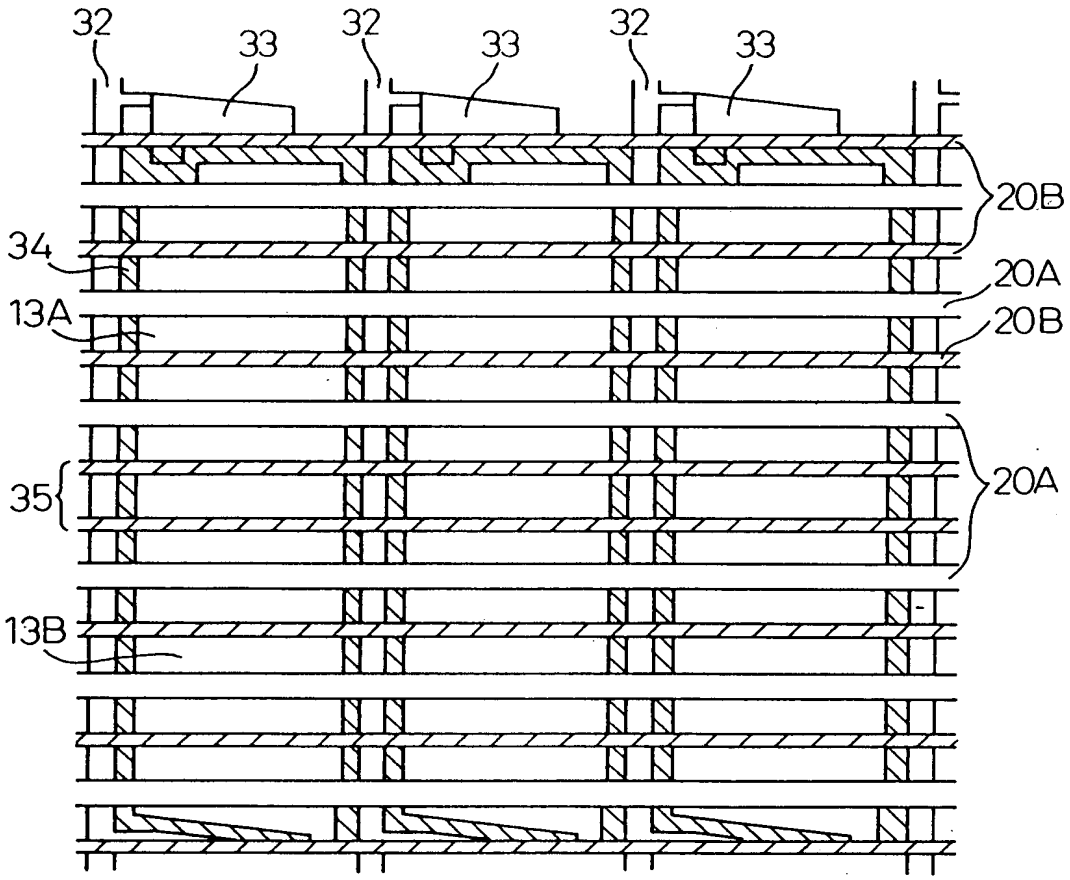


Fig.16

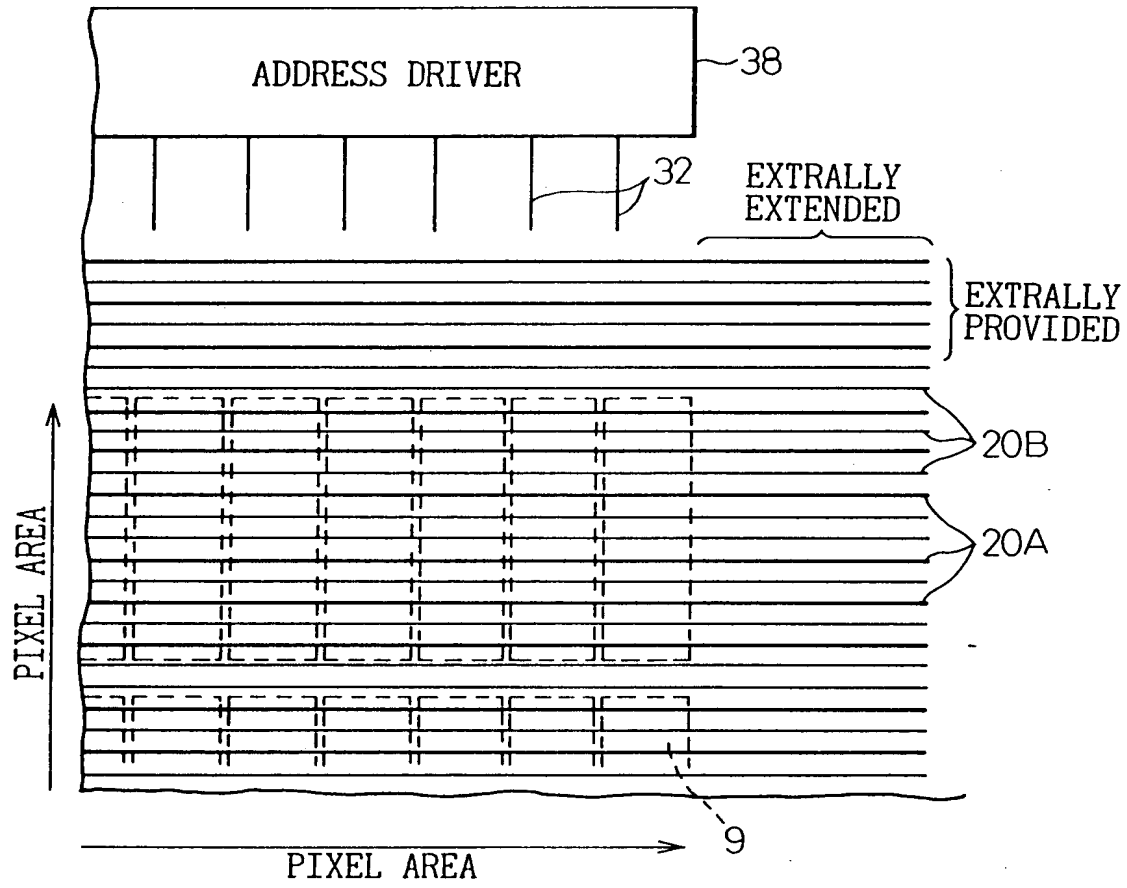

ADDRESS DRIVER
38
32
EXTRALLY EXTENDED
EXTRALLY PROVIDED
20B
20A
PIXEL AREA
9
PIXEL AREA

Fig.17

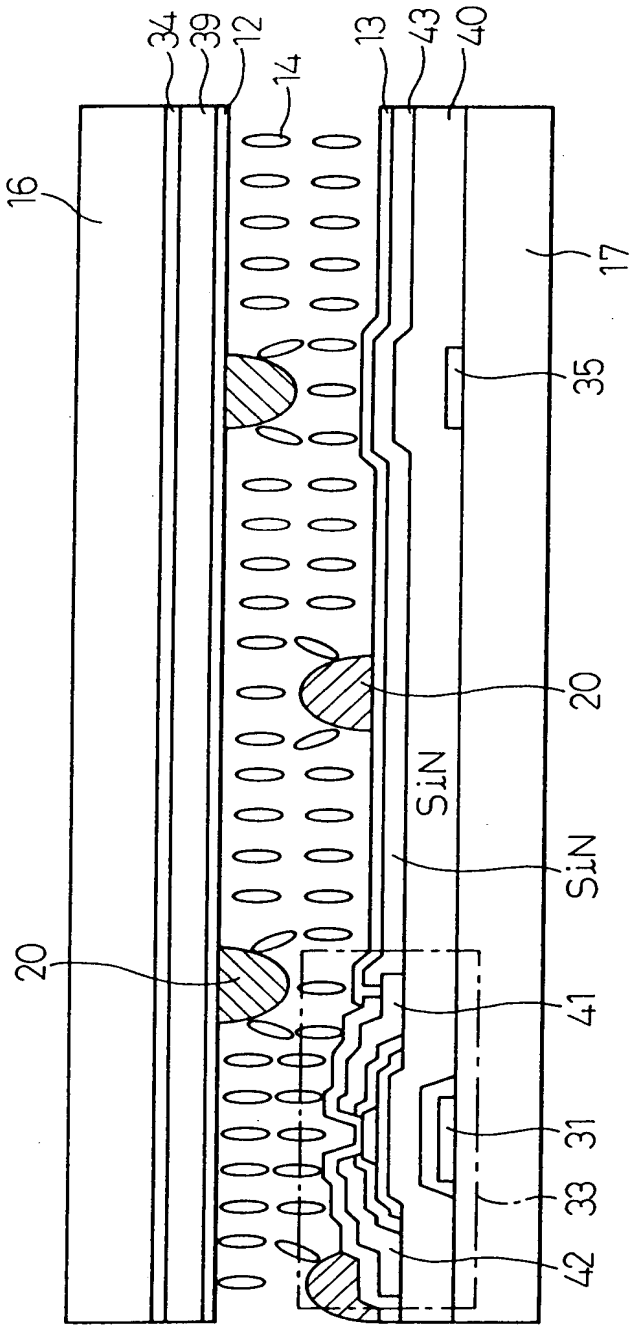


Fig.18A

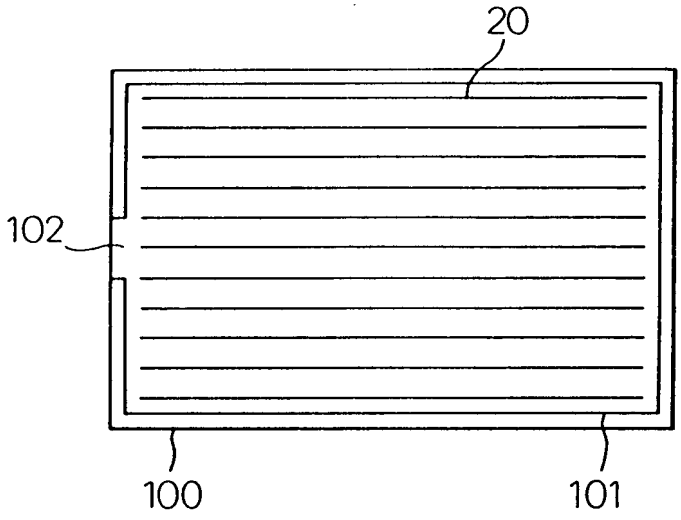


Fig.18B

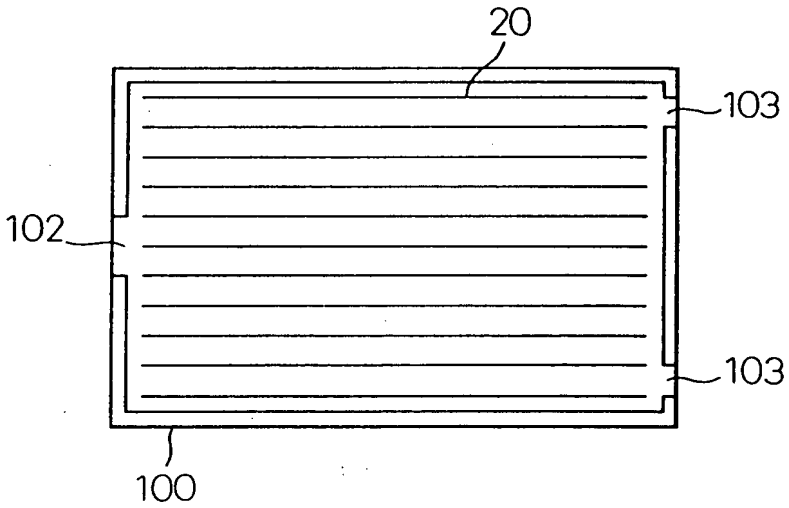


Fig.19

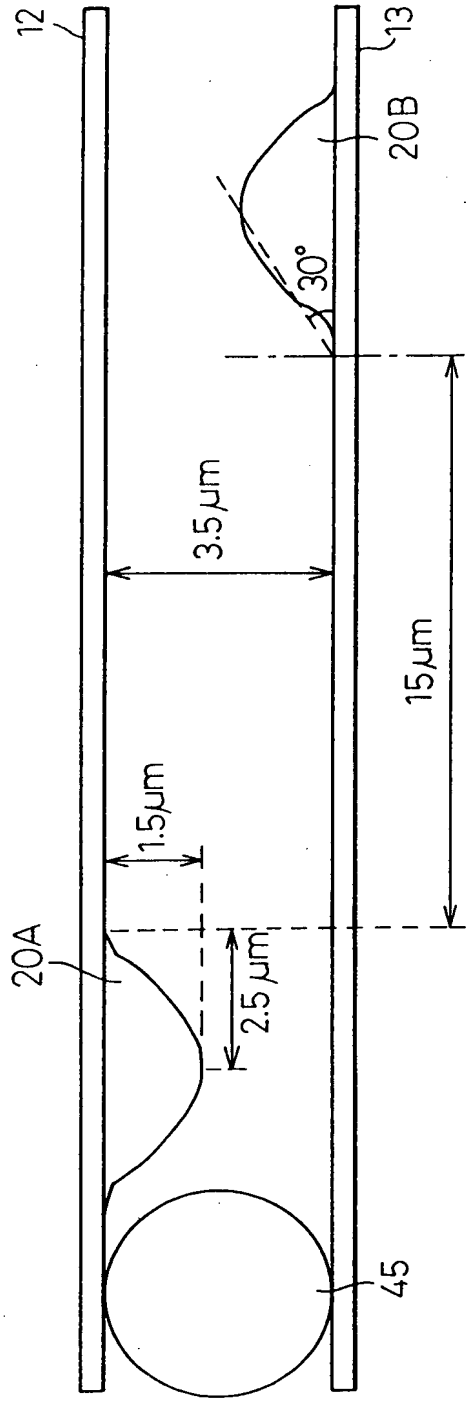


Fig.20A

ON RESPONSE SPEED

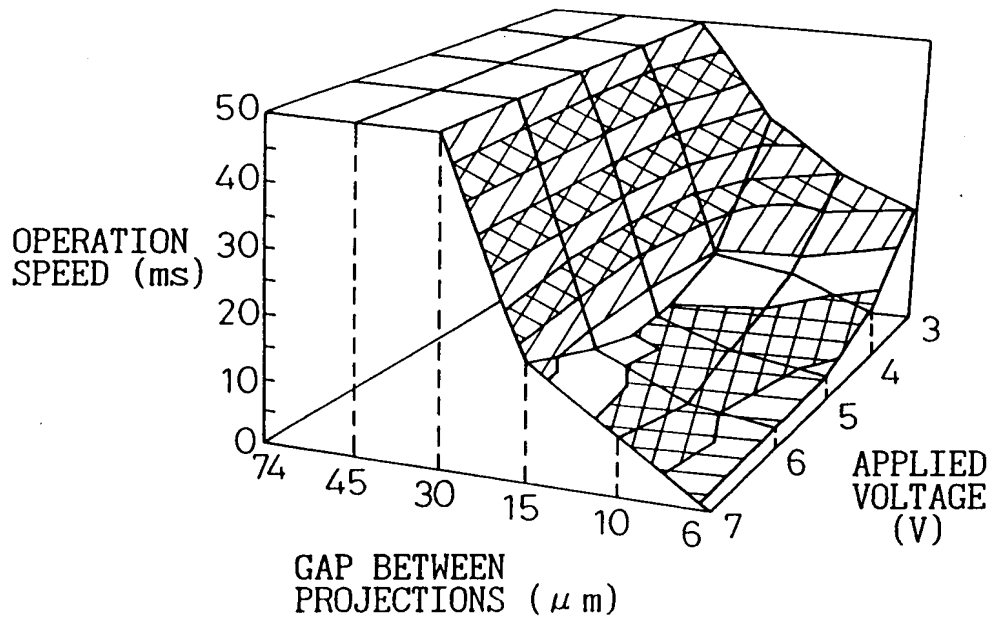


Fig.20B

OFF RESPONSE SPEED

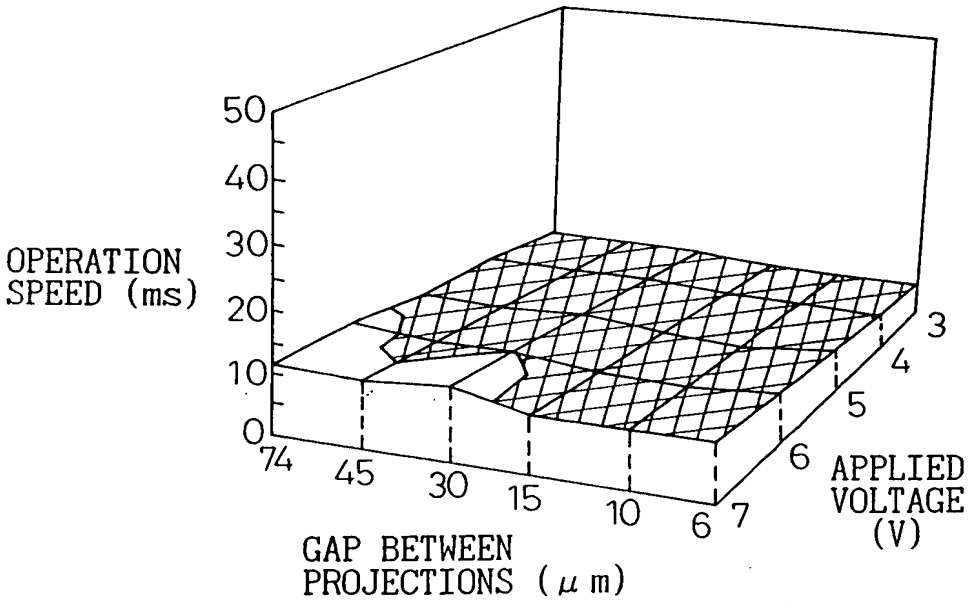


Fig.21

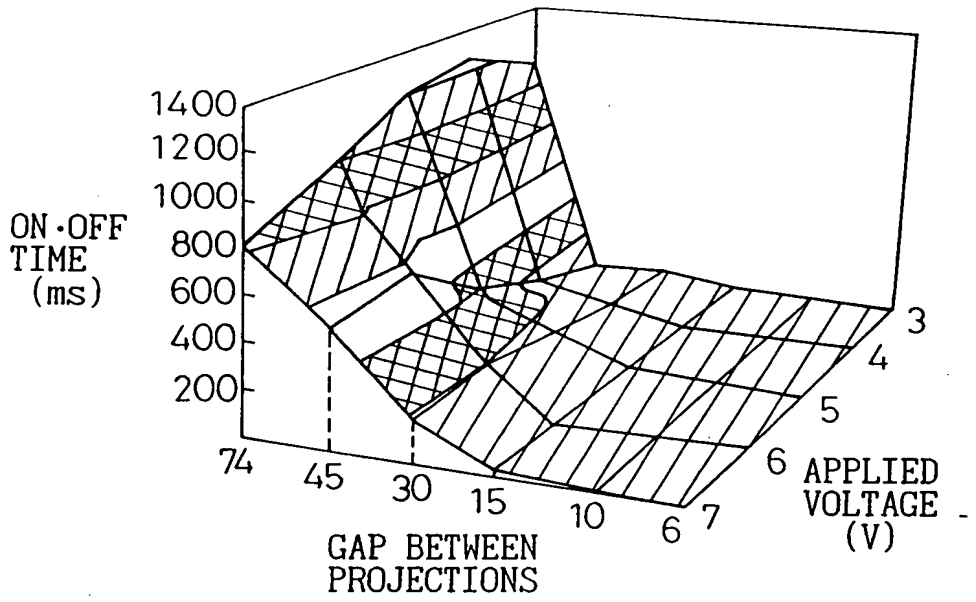

1400
1200
1000
800
600
400
200
ON·OFF TIME (ms)
74
45
30
15
10
6
GAP BETWEEN PROJECTIONS
3
4
5
6
7
APPLIED VOLTAGE (V)

Fig. 22

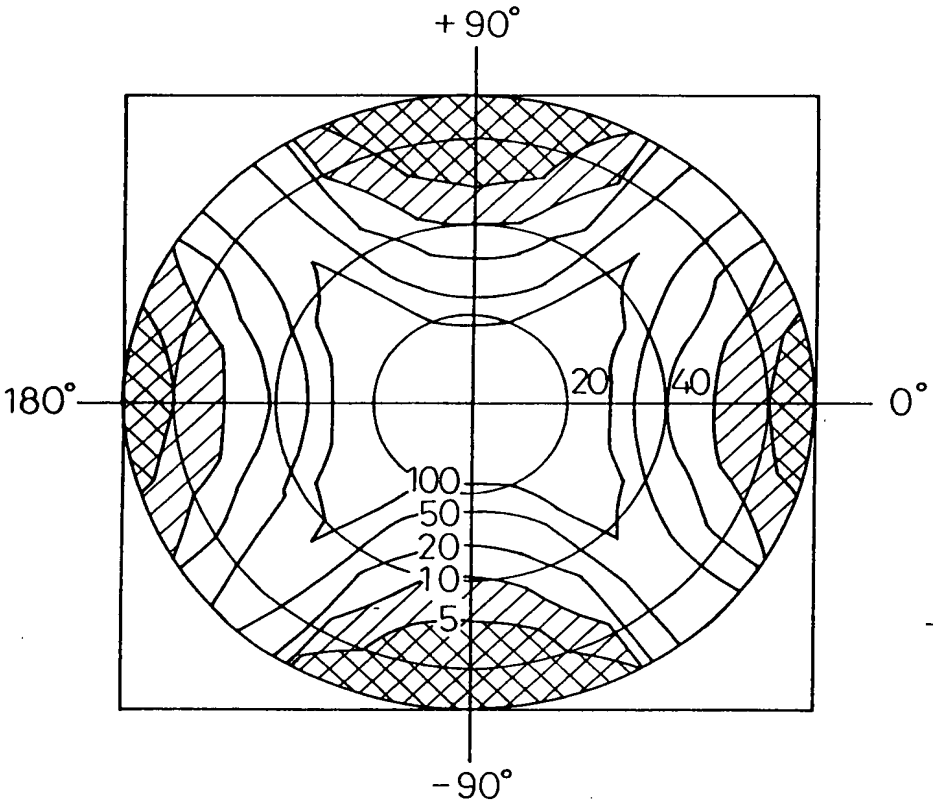


Fig.23A

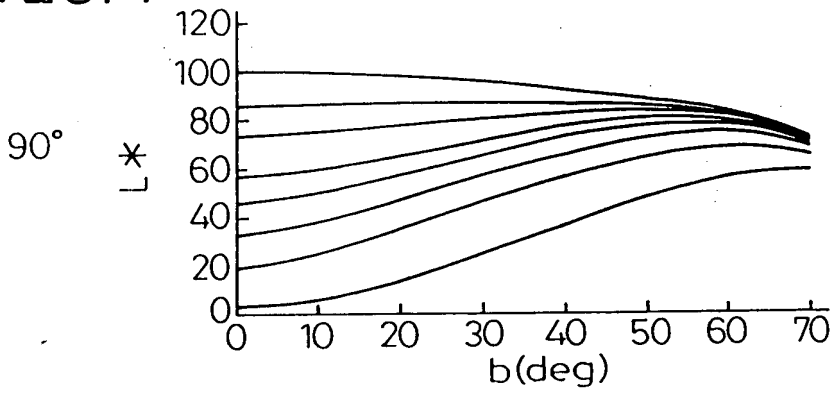


Fig.23B

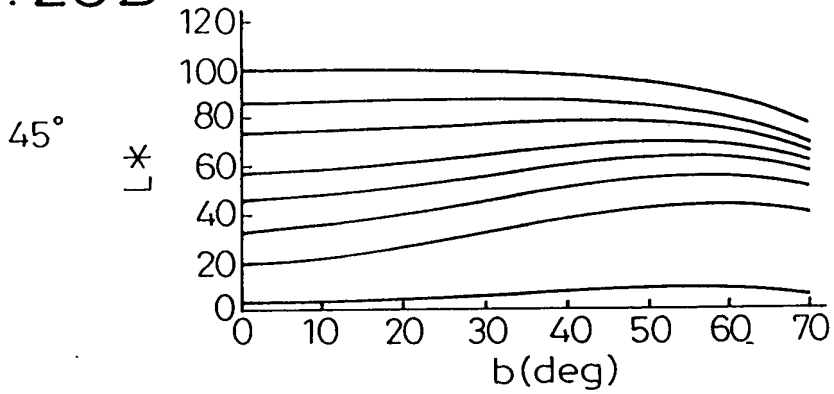


Fig.23C

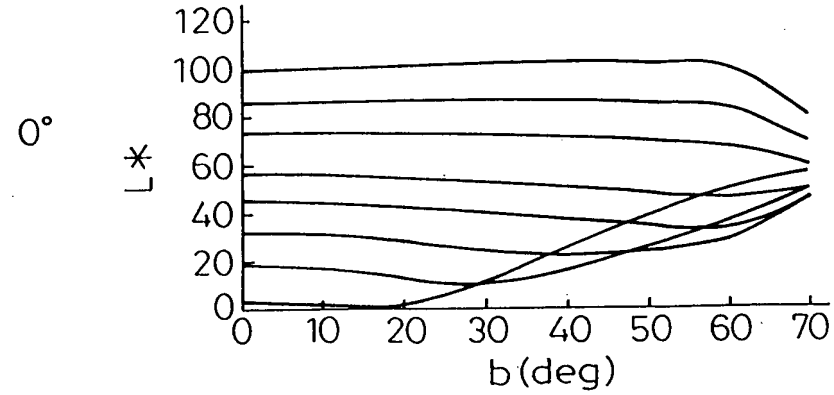


Fig.24A

-45°

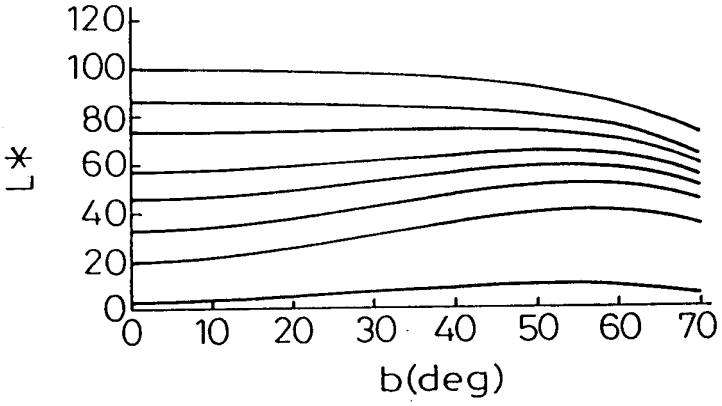


Fig.24B

-90°

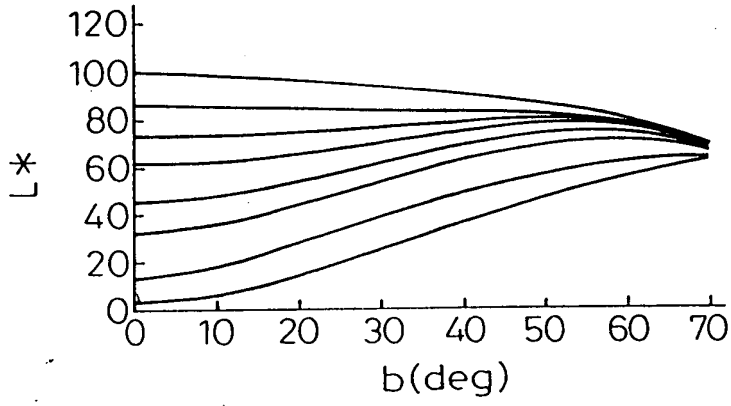


Fig.25

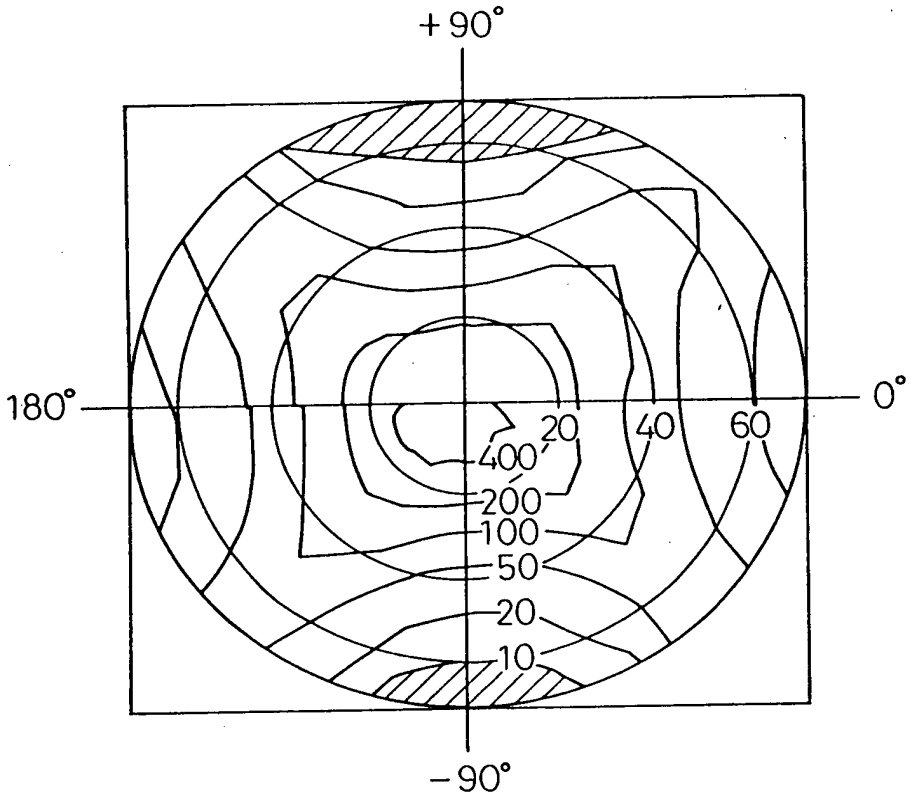


Fig.26A

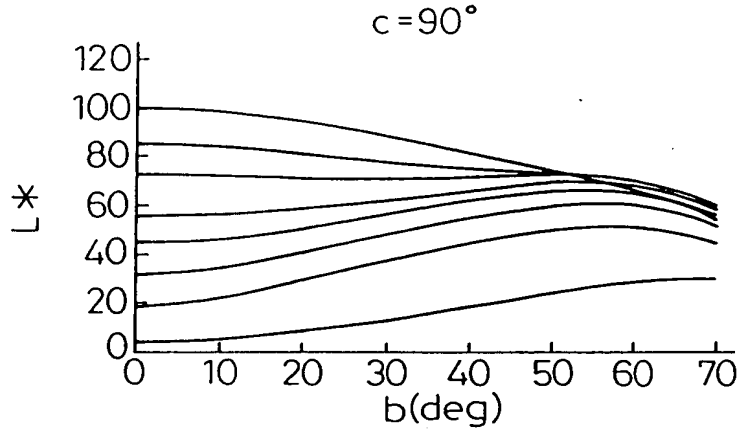


Fig.26B

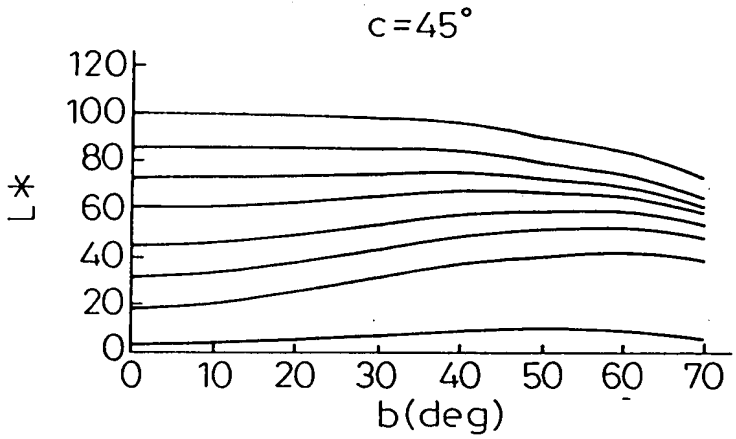


Fig.26C

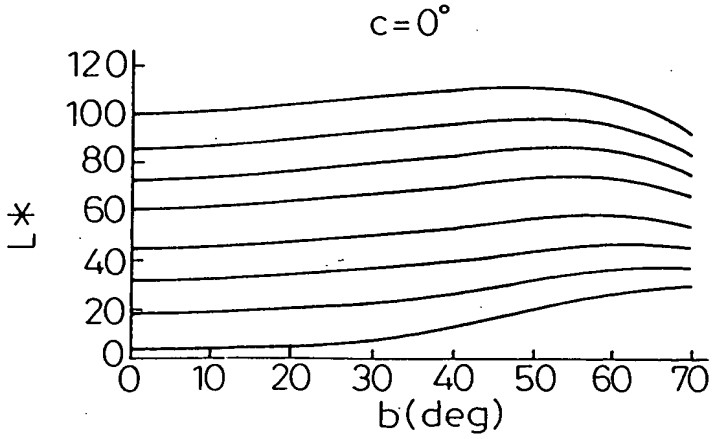


Fig. 27

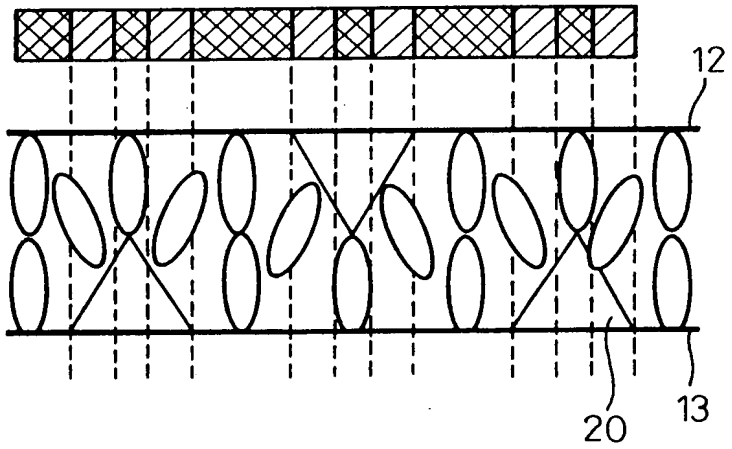


Fig.28

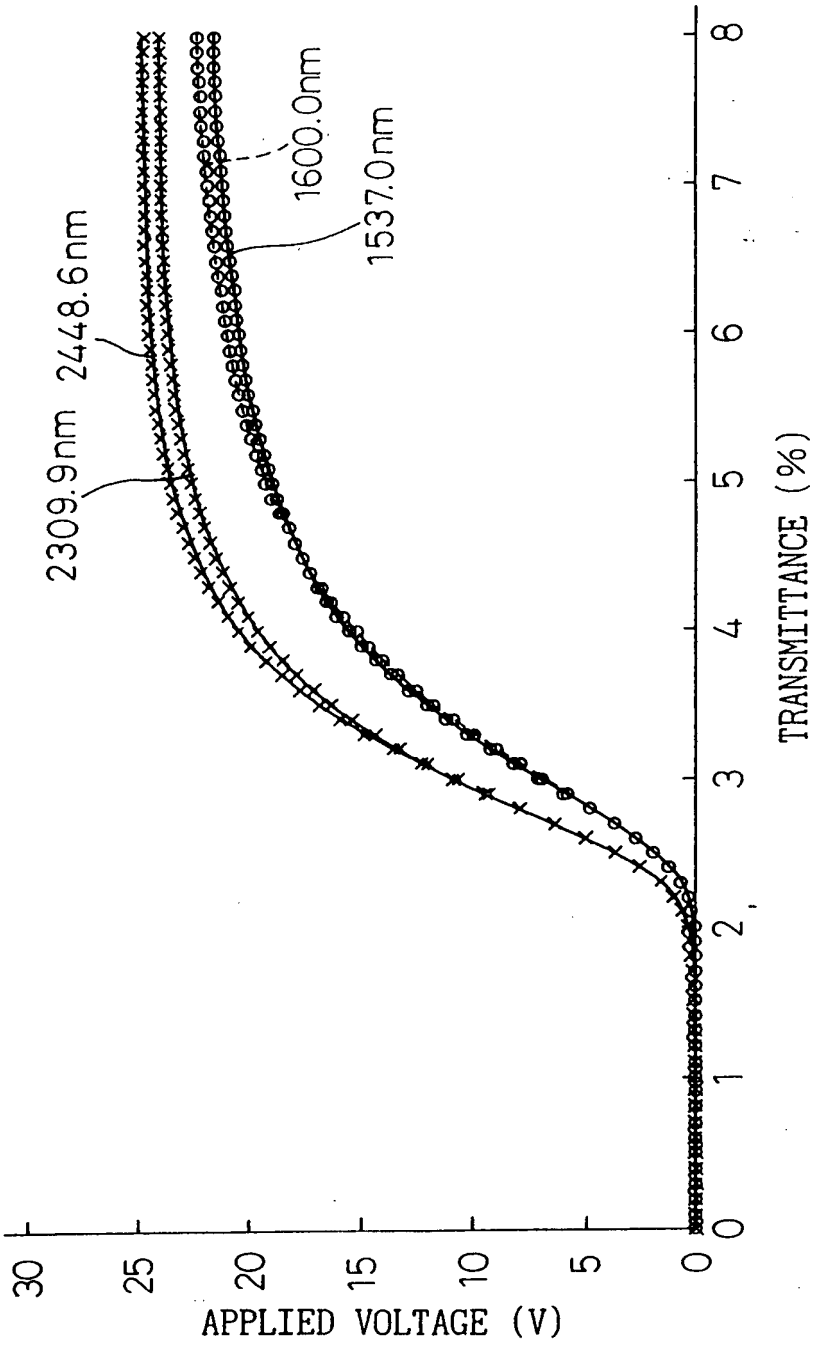

2309.9nm
2448.6nm
1600.0nm
1537.0nm
APPLIED VOLTAGE (V)
TRANSMITTANCE (%)
0
5
10
15
20
25
30
1
2
3
4
5
6
7
8

Fig.29

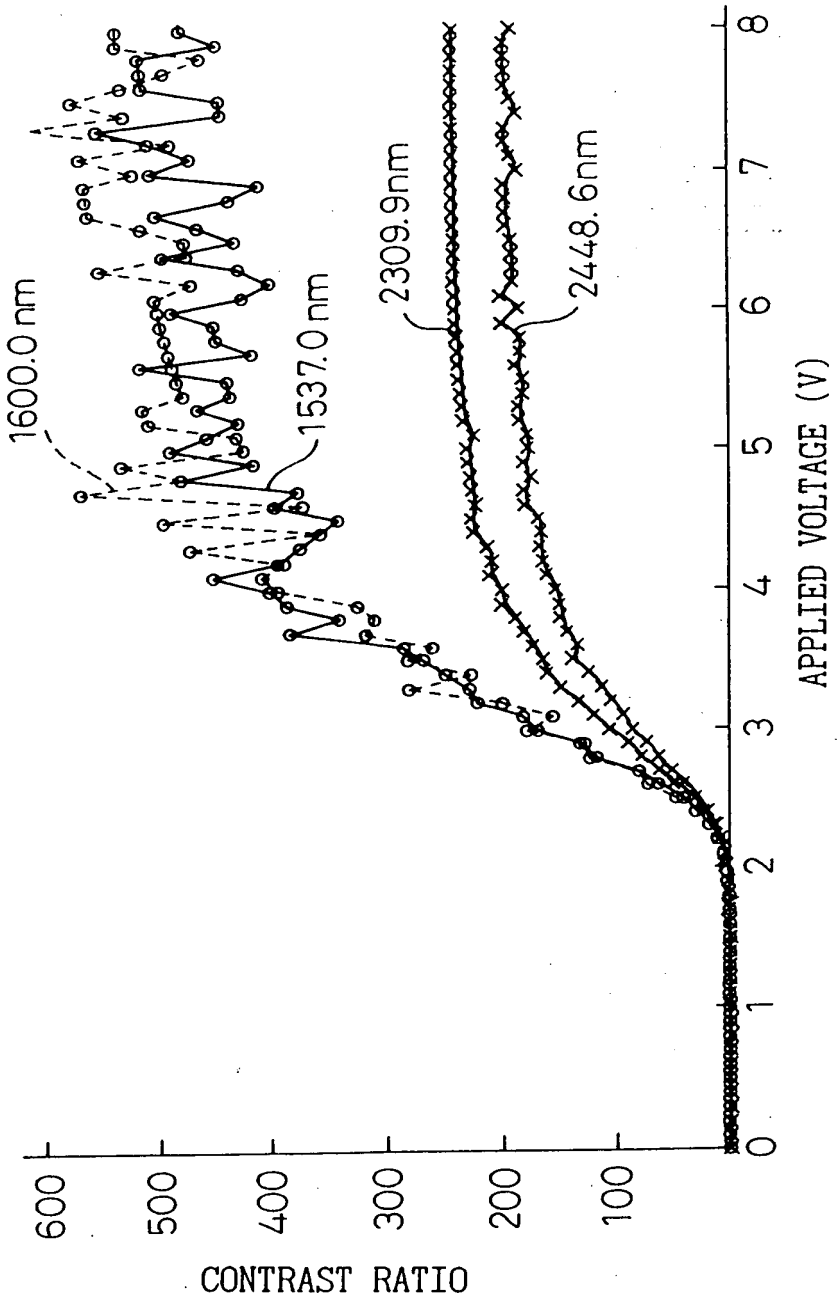

1600.0nm
1537.0nm
2309.9nm
2448.6nm
CONTRAST RATIO
APPLIED VOLTAGE (V)
0
1
2
3
4
5
6
7
8
100
200
300
400
500
600

Fig.30

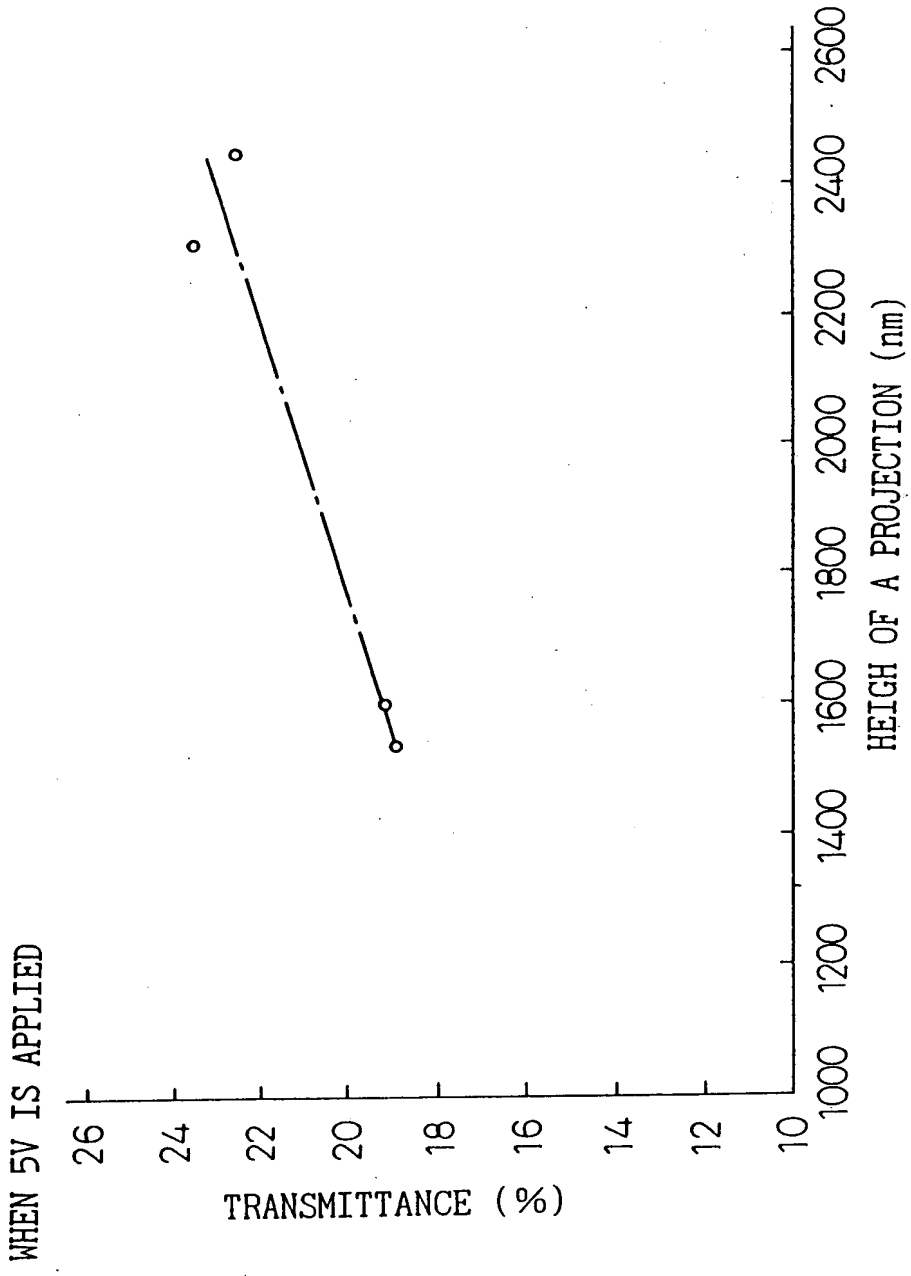

WHEN 5V IS APPLIED
TRANSMITTANCE (%)
26
24
22
20
18
16
14
12
10
1000
1200
1400
1600
1800
2000
2200
2400
2600
HEIGH OF A PROJECTION (nm)

Fig.31

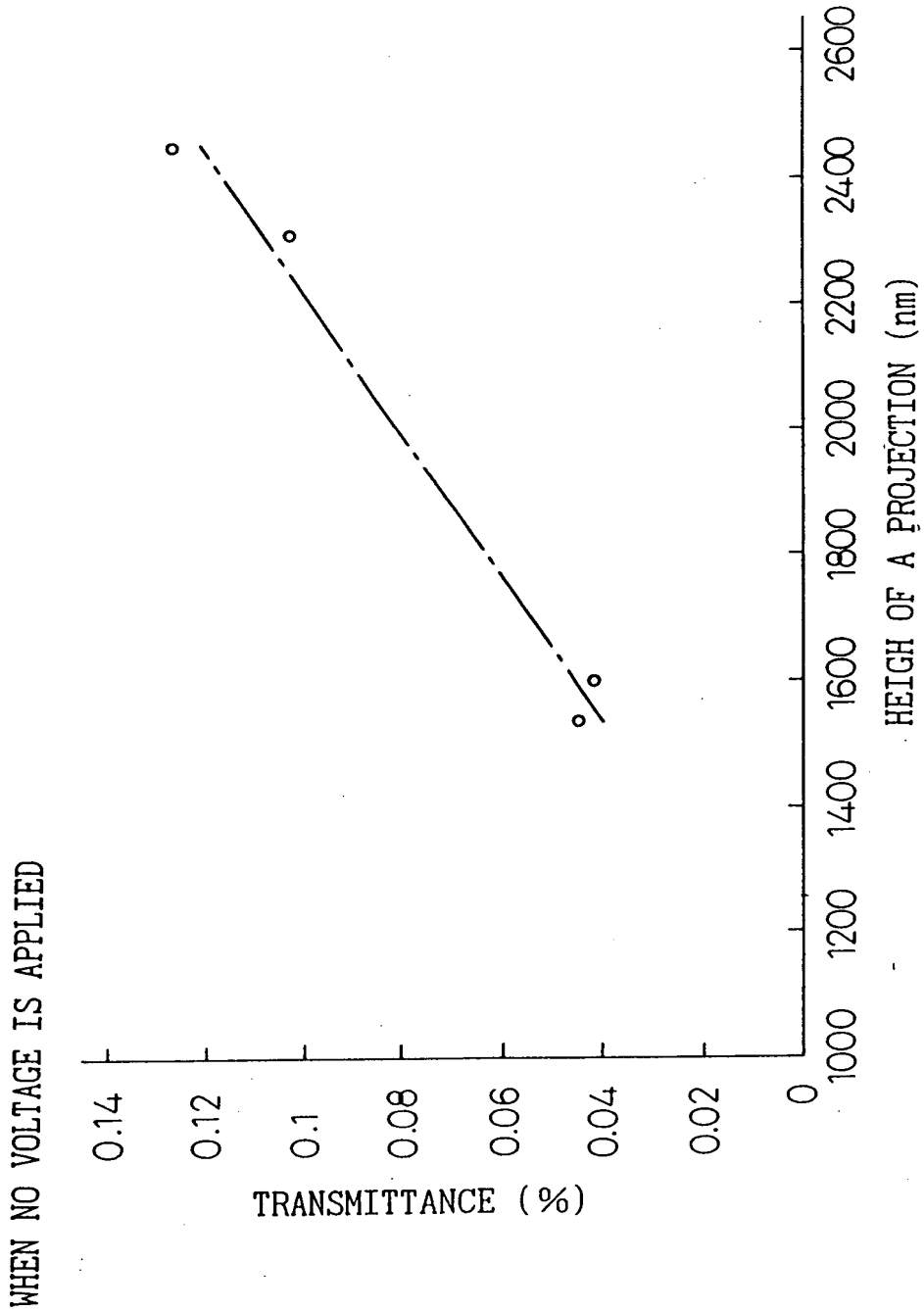

WHEN NO VOLTAGE IS APPLIED
TRANSMITTANCE (%)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1000
1200
1400
1600
1800
2000
2200
2400
2600
HEIGH OF A PROJECTION (nm)

Fig.32

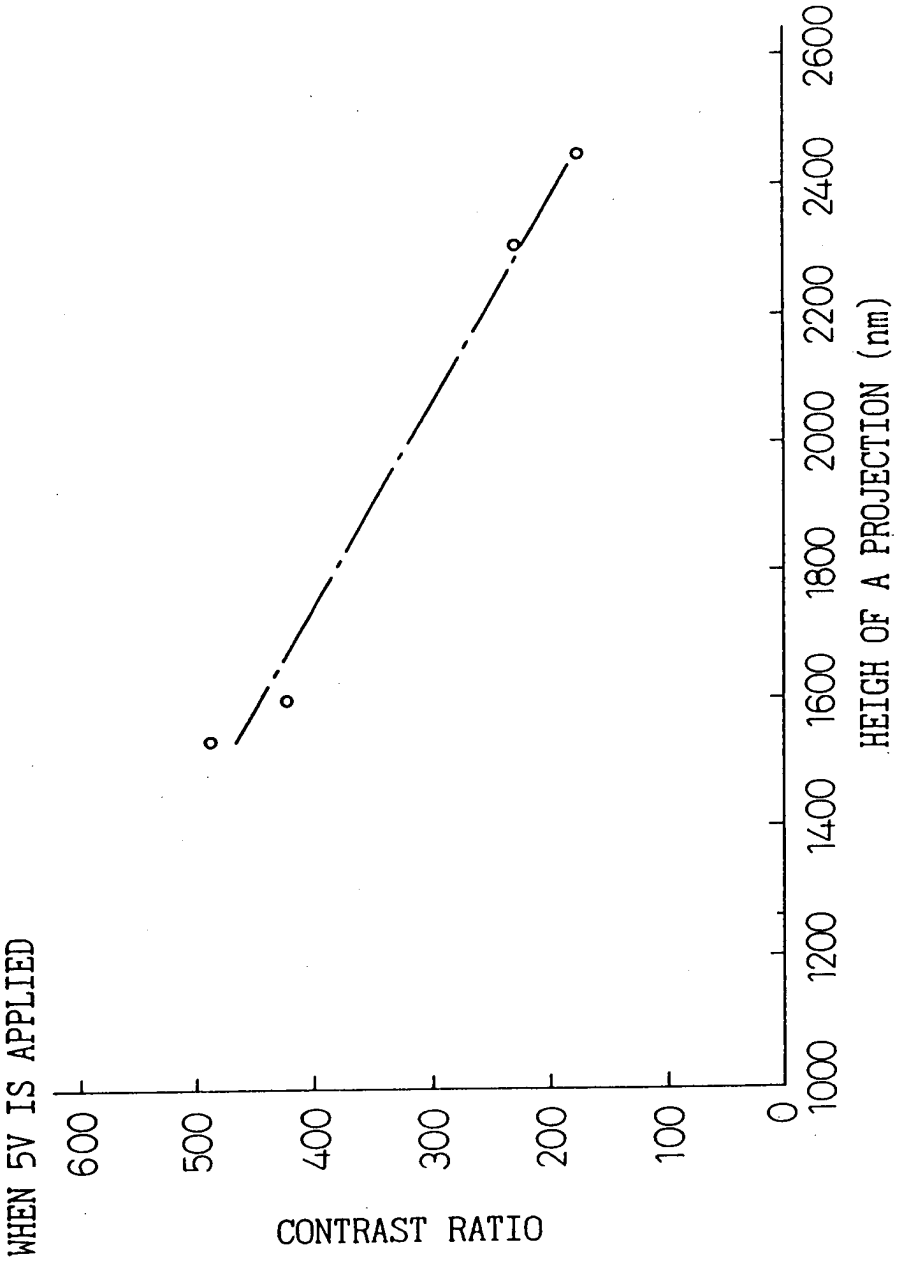

WHEN 5V IS APPLIED
CONTRAST RATIO
600
500
400
300
200
100
0
1000
1200
1400
1600
1800
2000
2200
2400
2600
HEIGH OF A PROJECTION (nm)

Fig.33

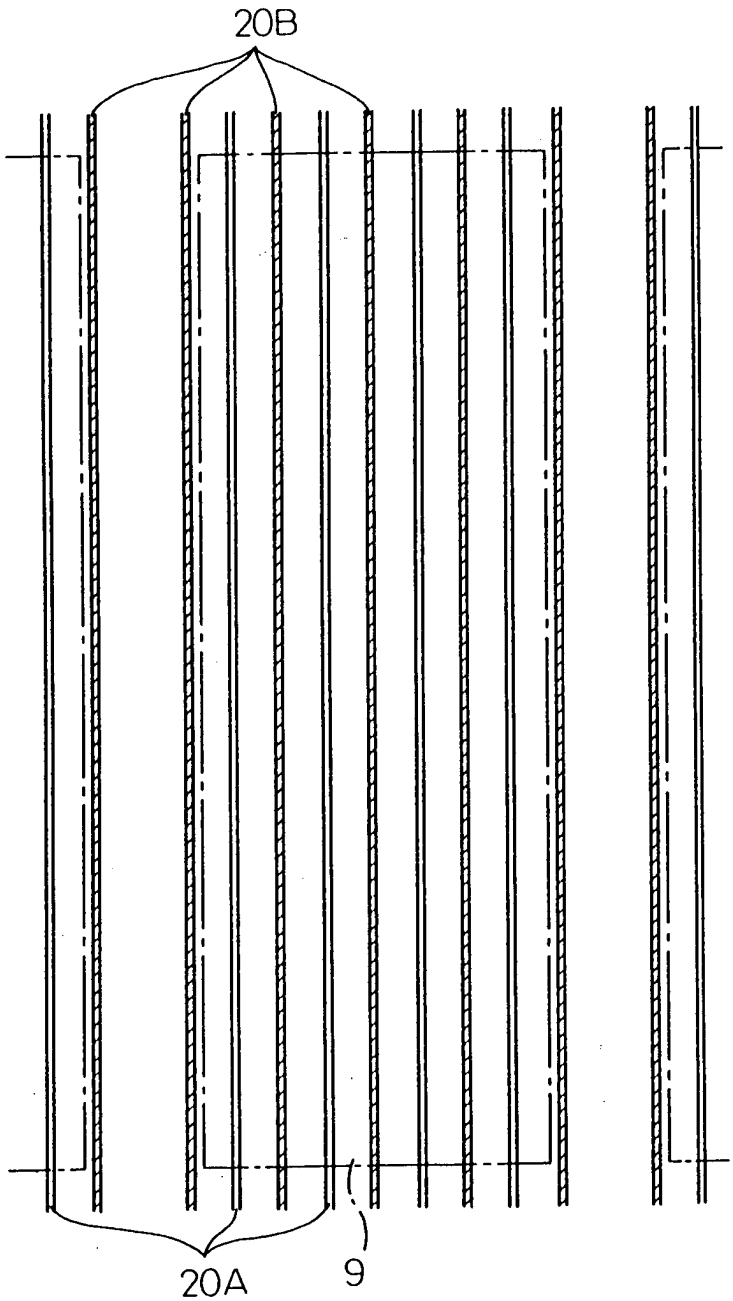


Fig.34

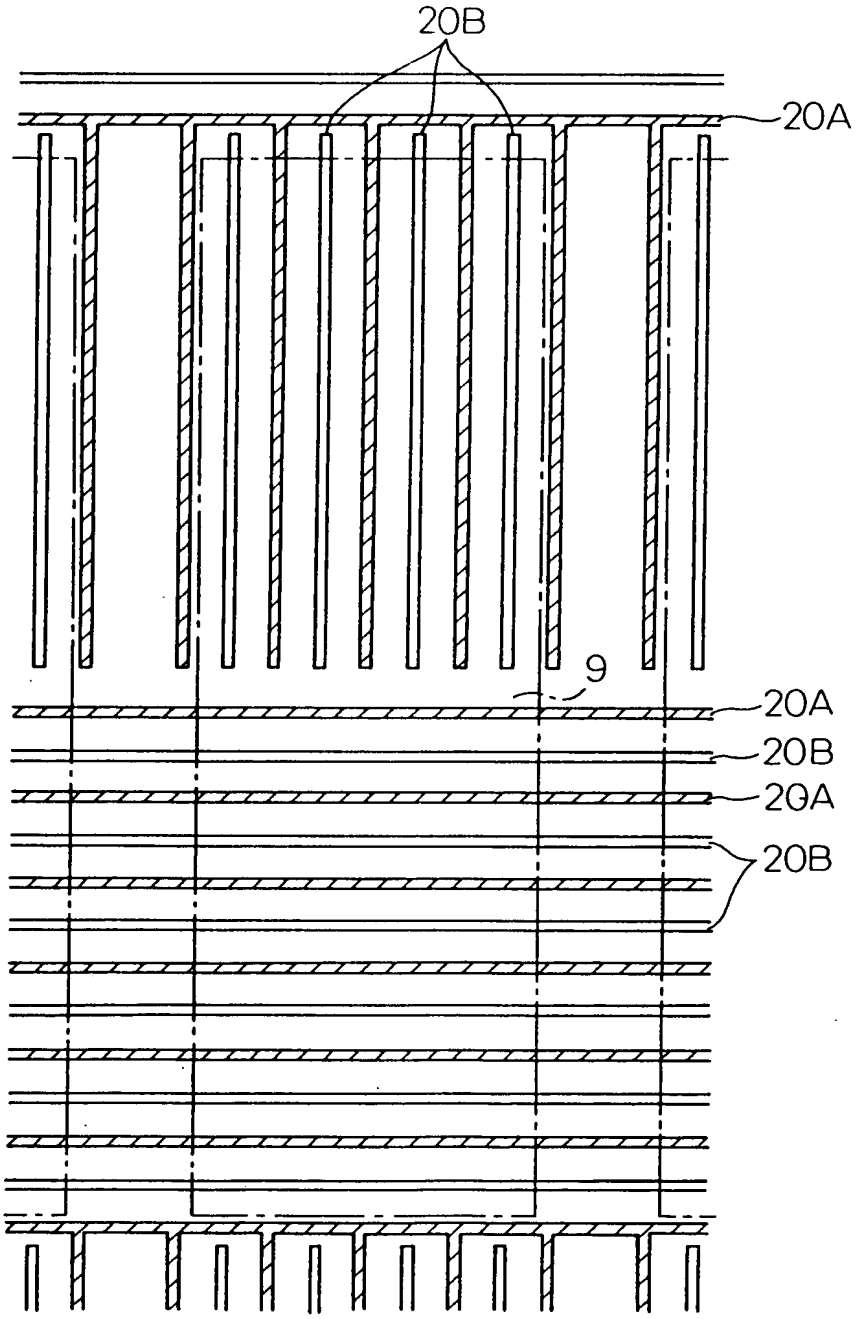


Fig.35

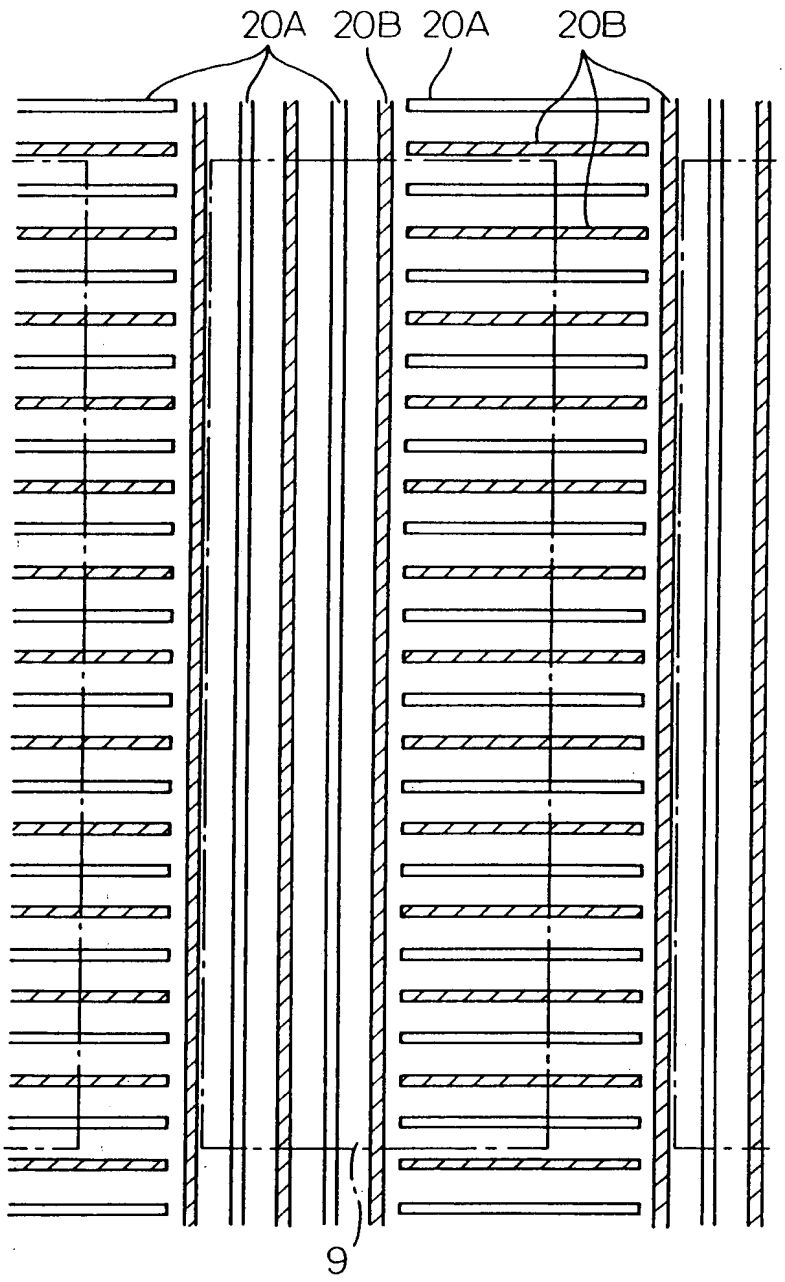


Fig.36

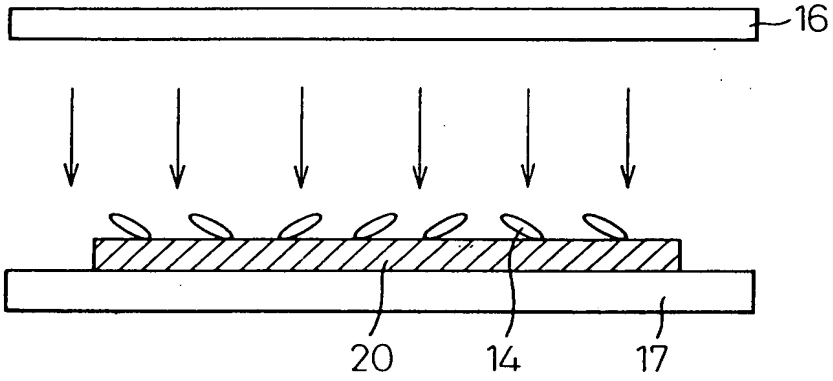


Fig.37A

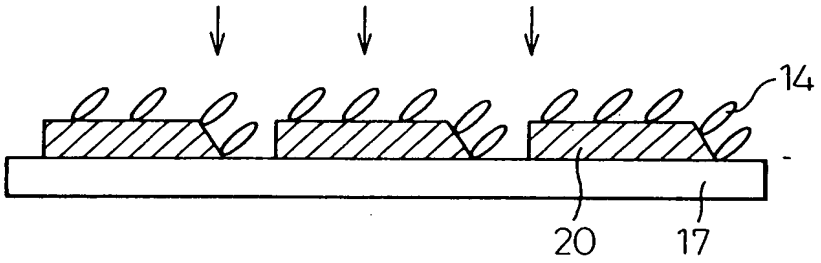


Fig.37B

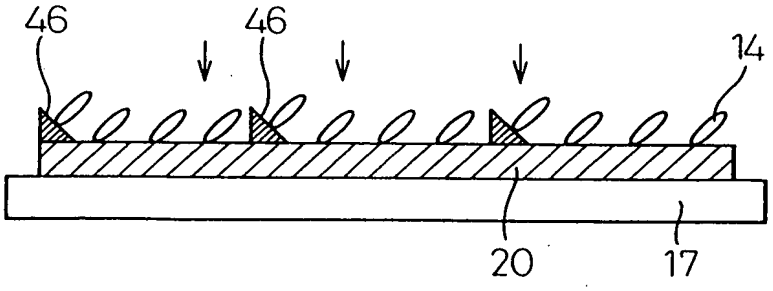


Fig.38A

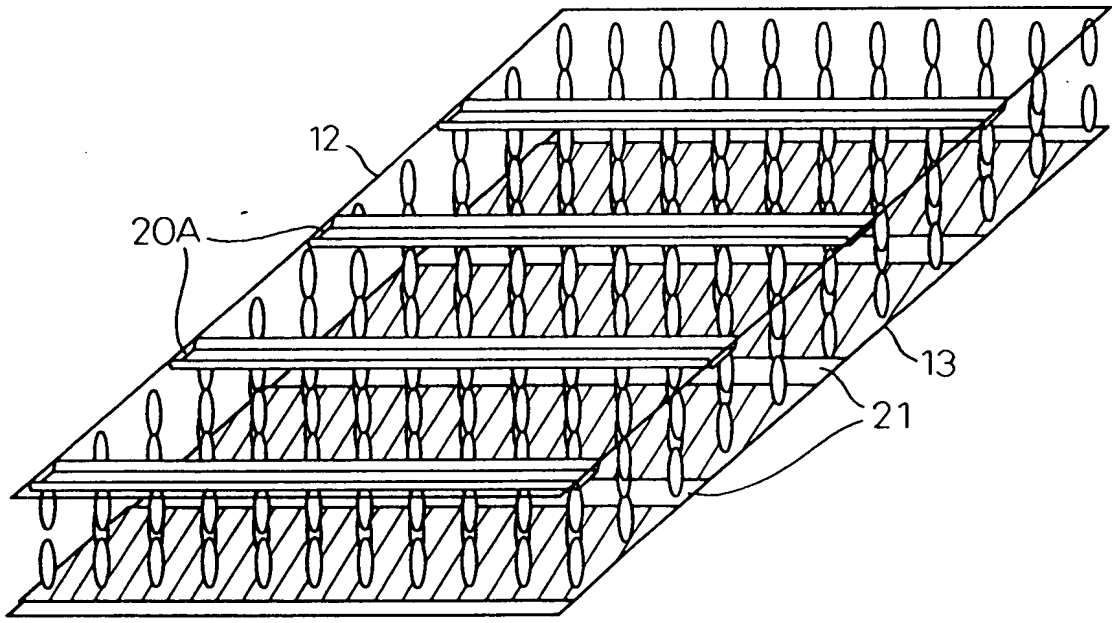


Fig.38B

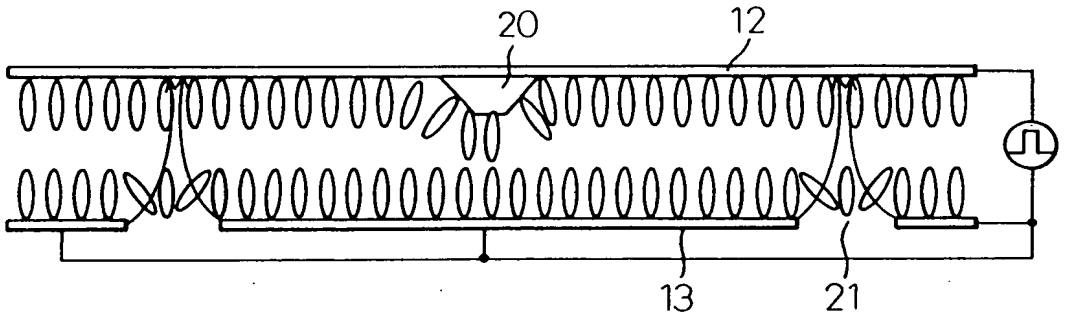


Fig.39

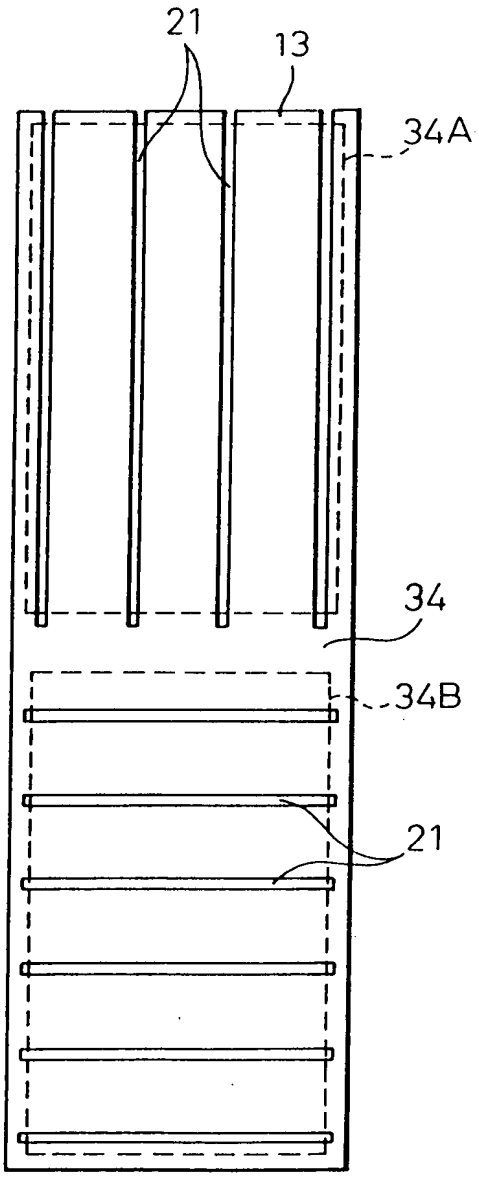


Fig.40

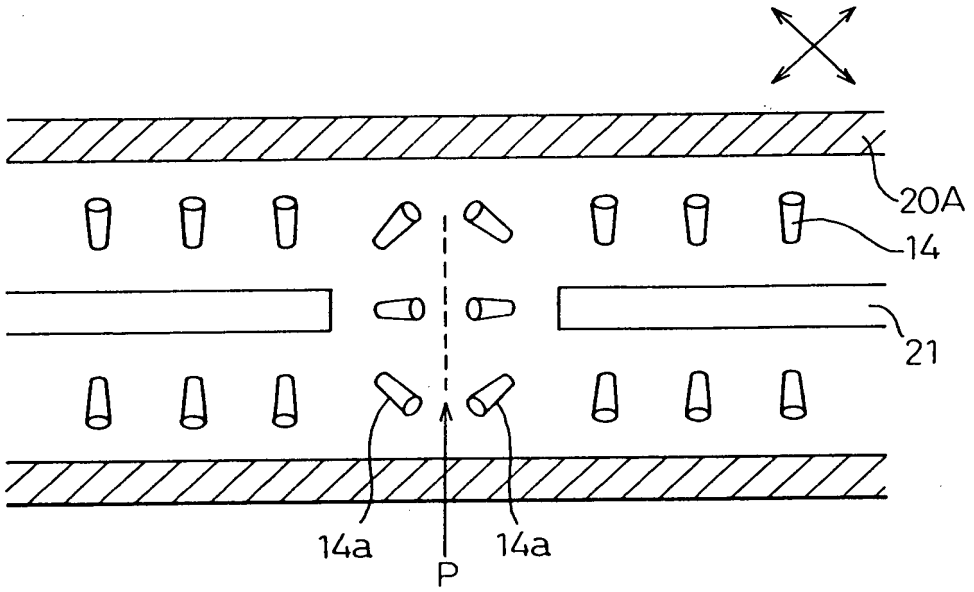


Fig.41

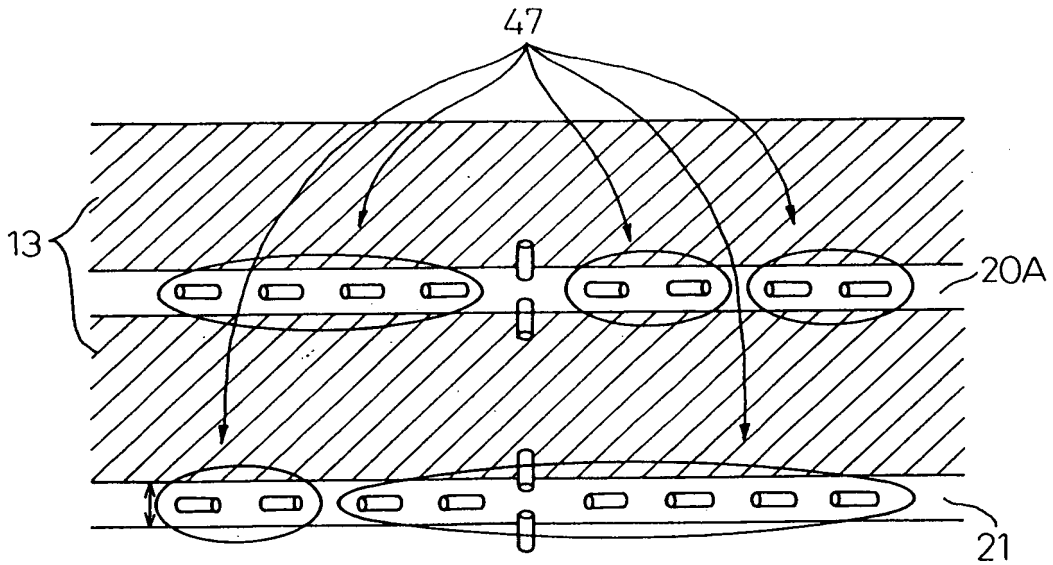


Fig.42

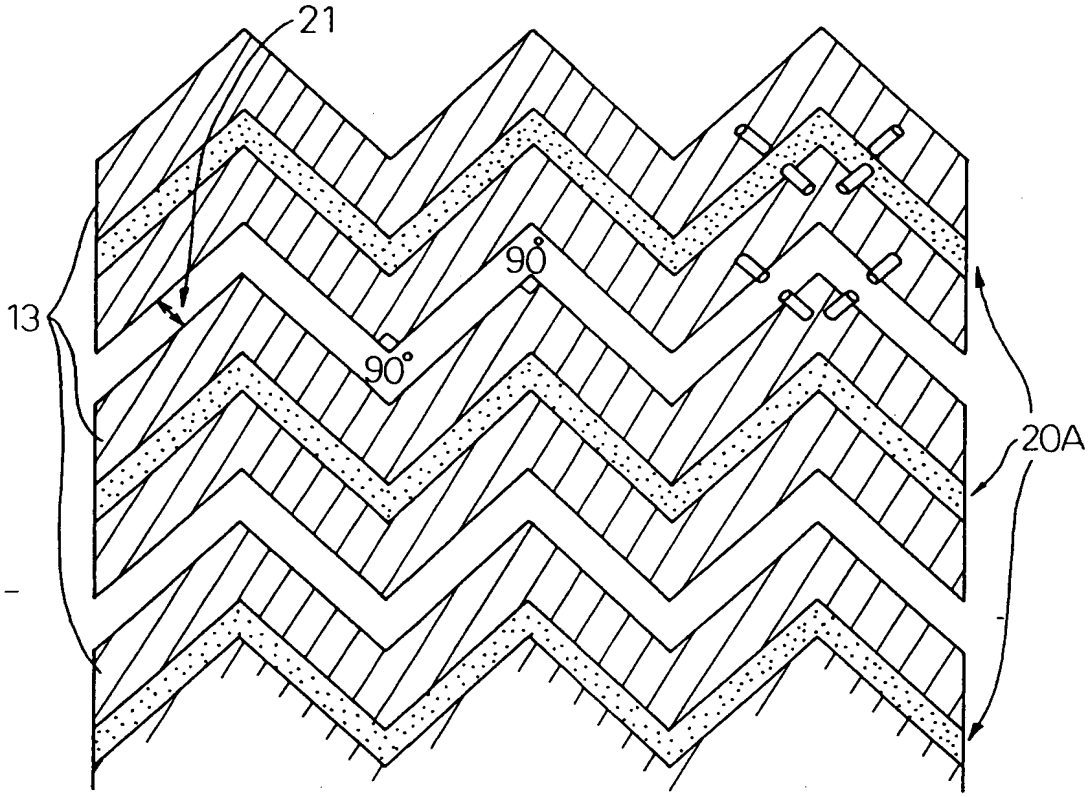


Fig.43

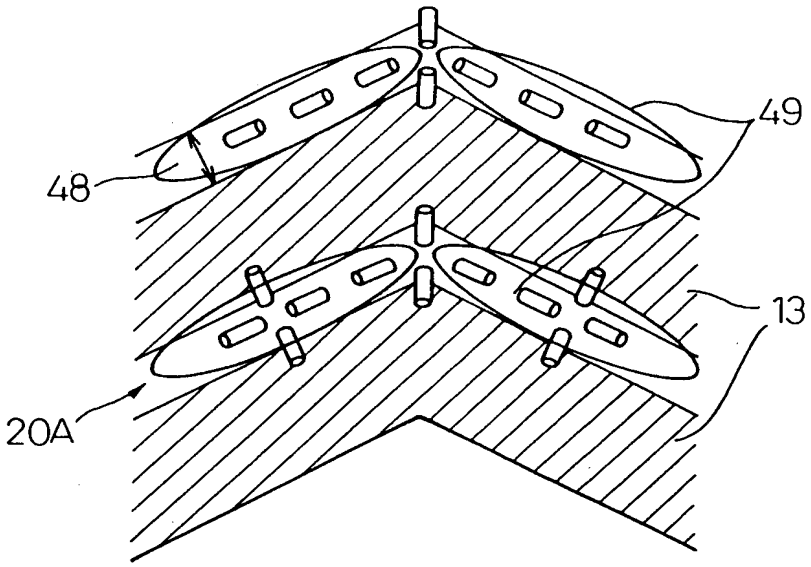


Fig.44

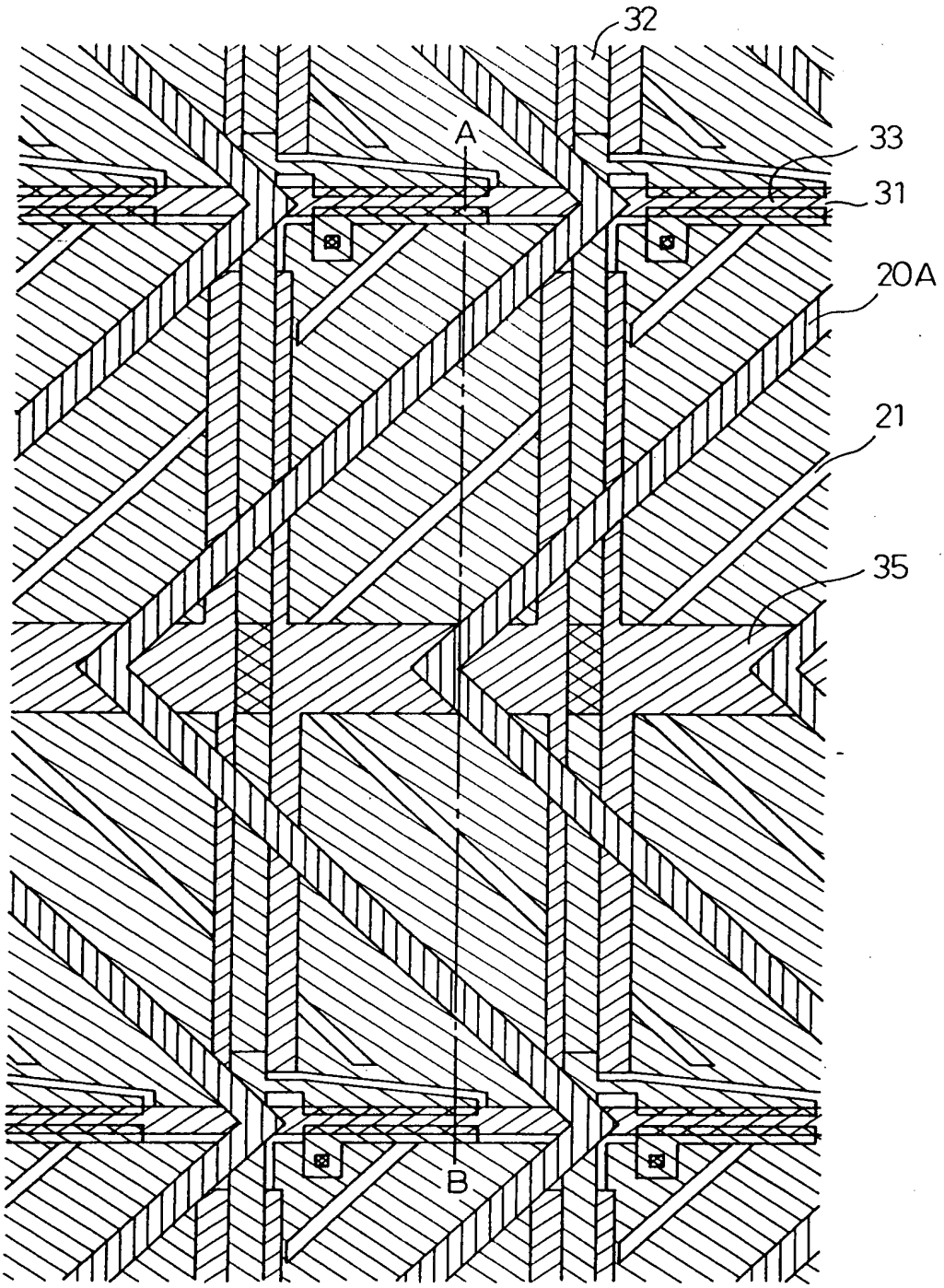


Fig.45

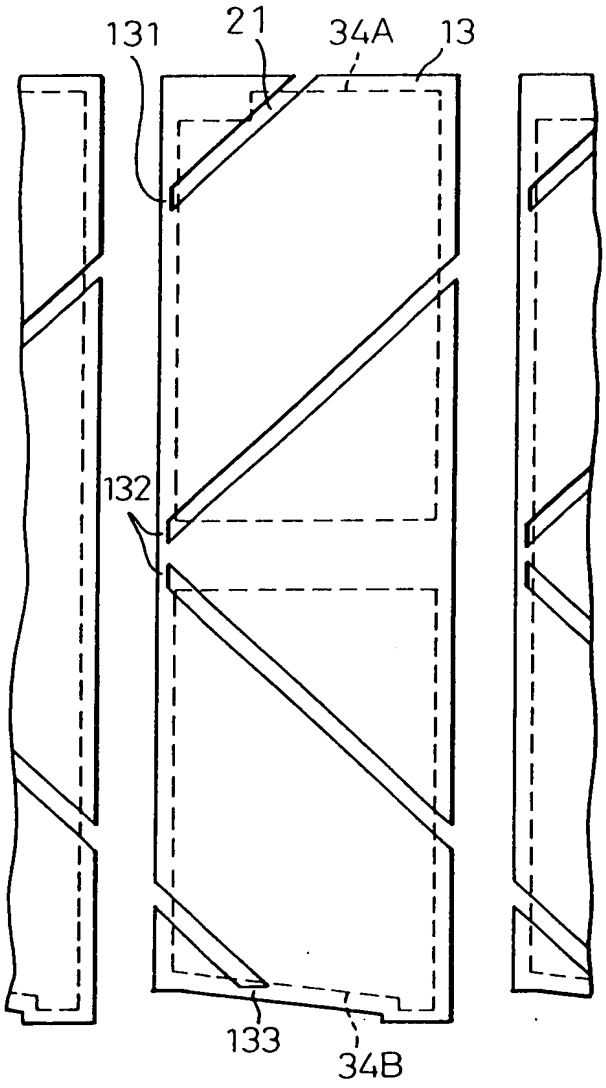


Fig.46

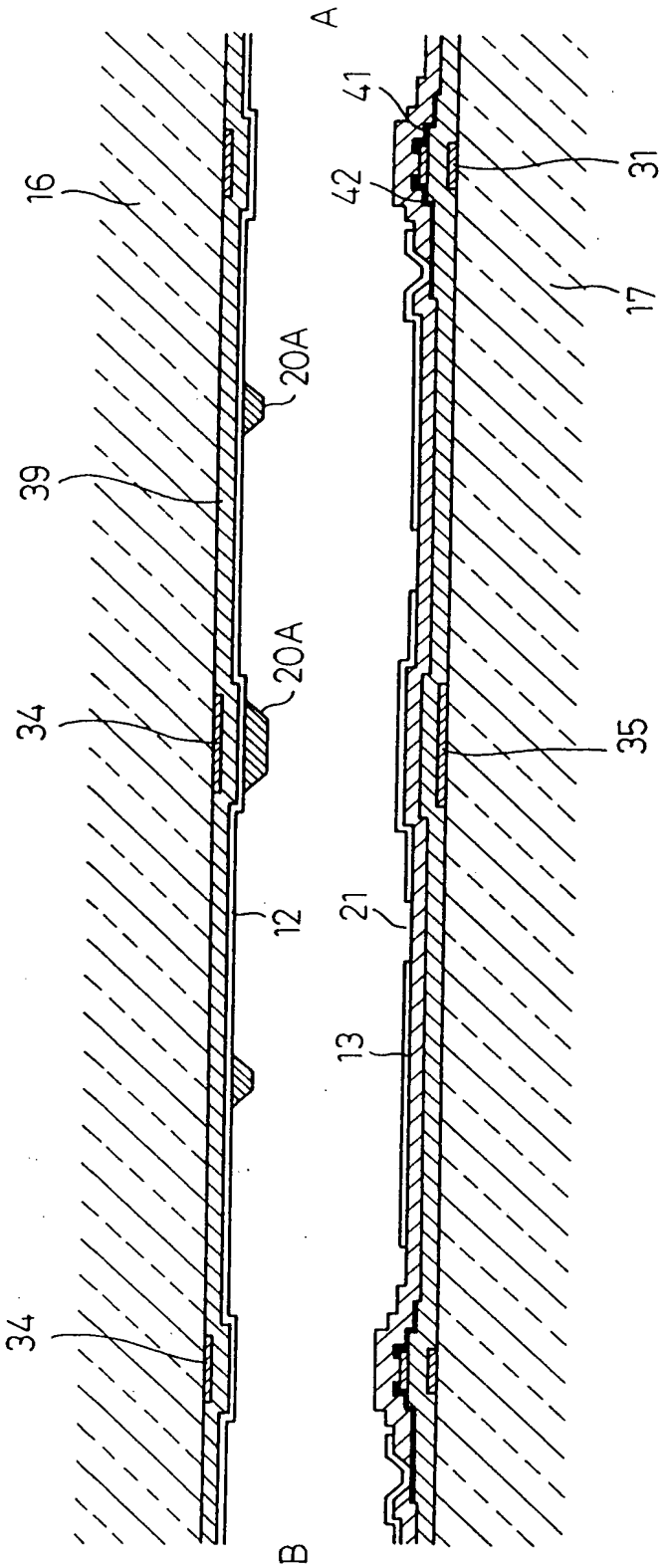


Fig.47

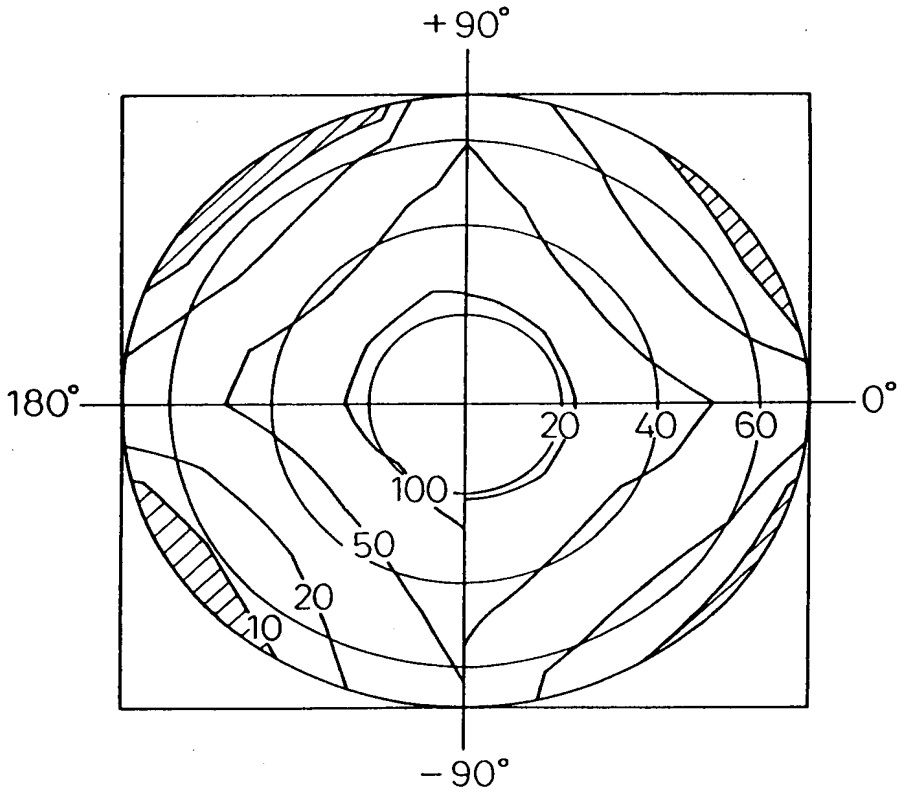


Fig.48A

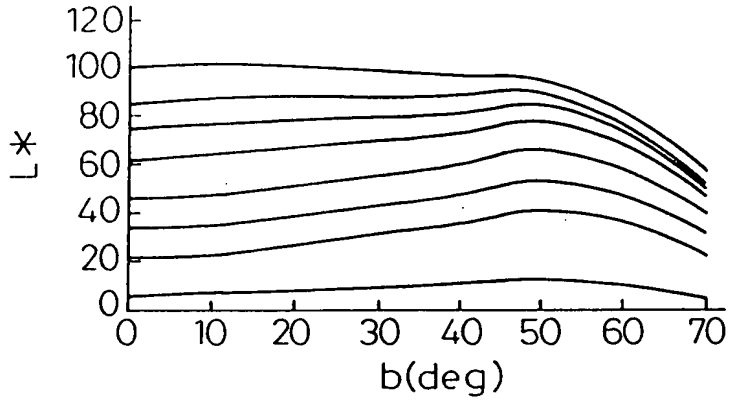


Fig.48B

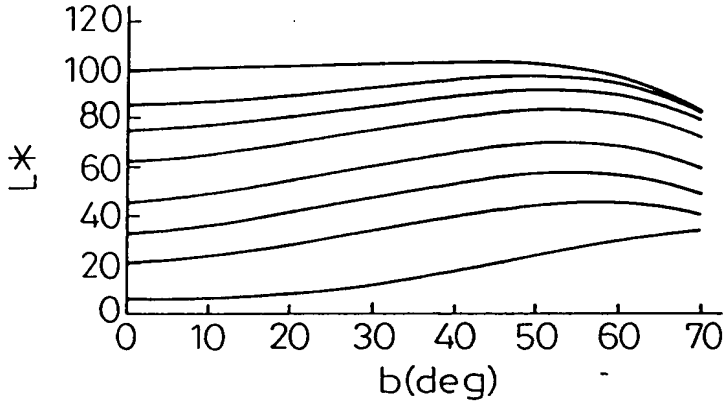


Fig.48C

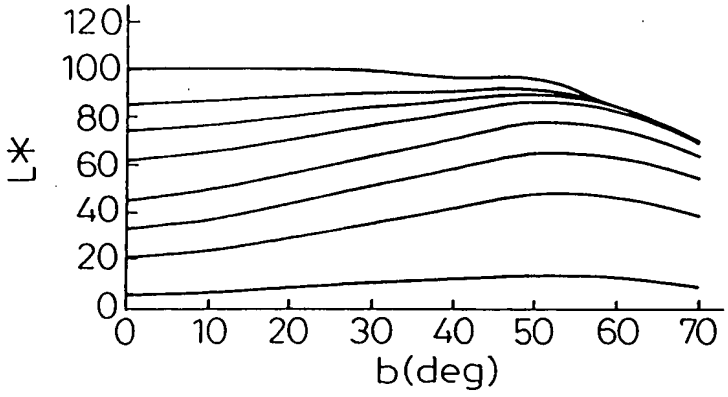


Fig.49A

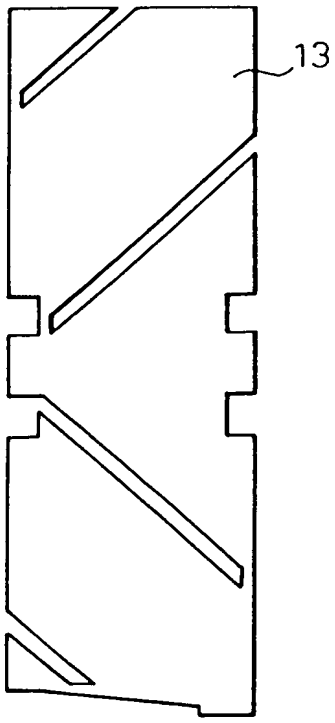


Fig.49B

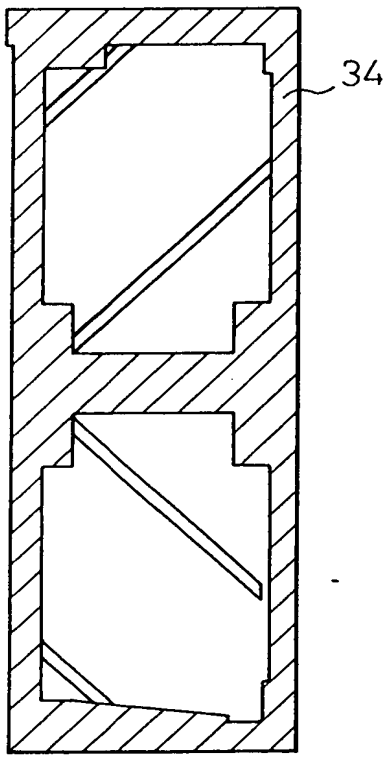


Fig.50A

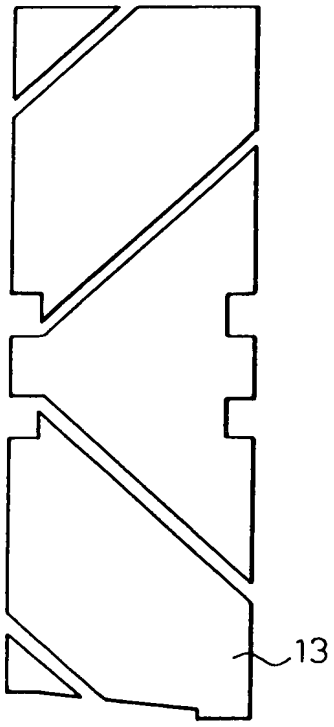


Fig.50B

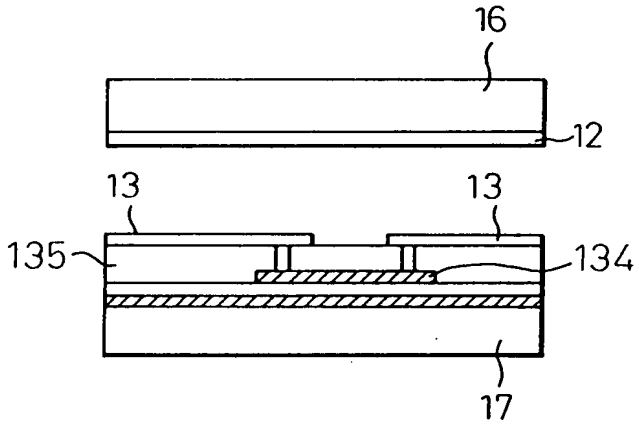


Fig.51

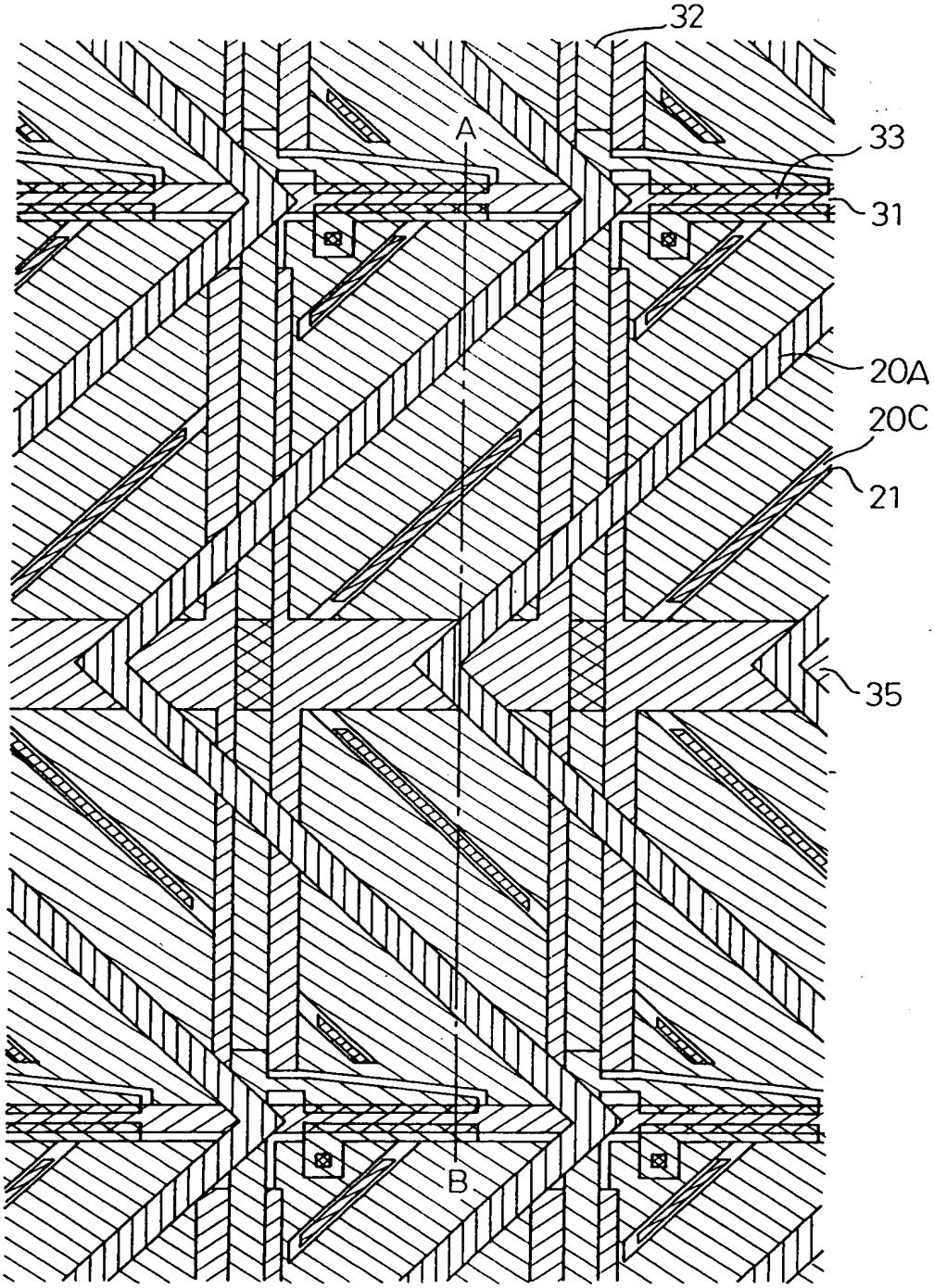


Fig.52

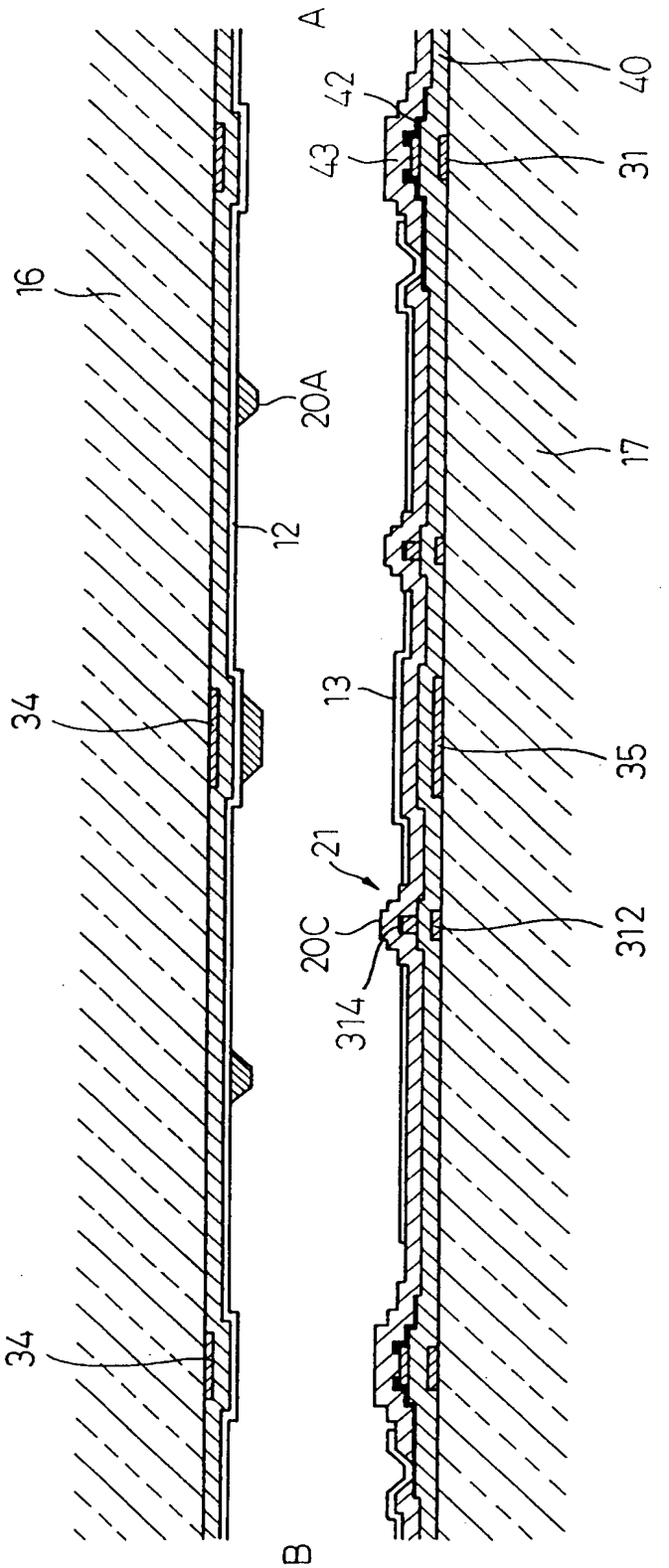


Fig.53A

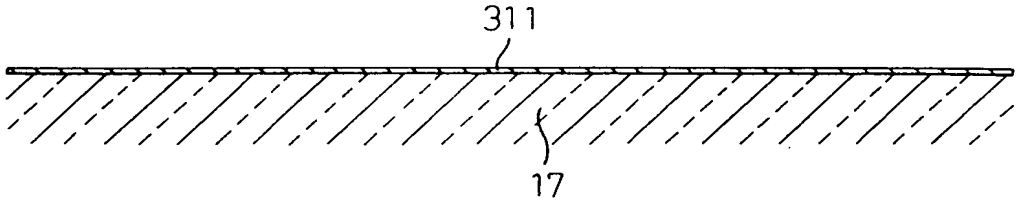


Fig.53B

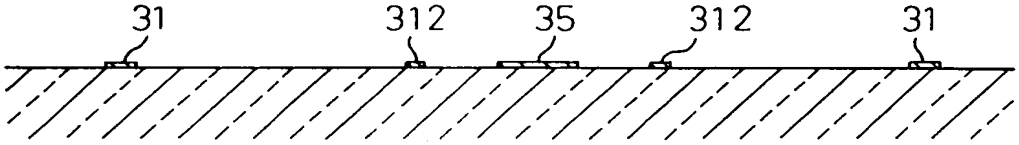


Fig.53C

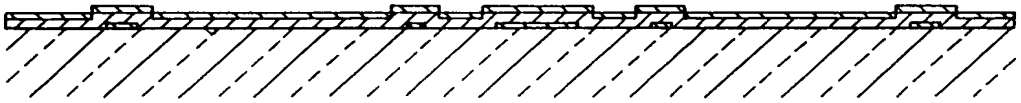


Fig.53D

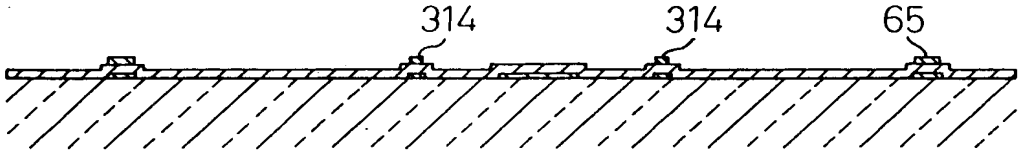


Fig.53E

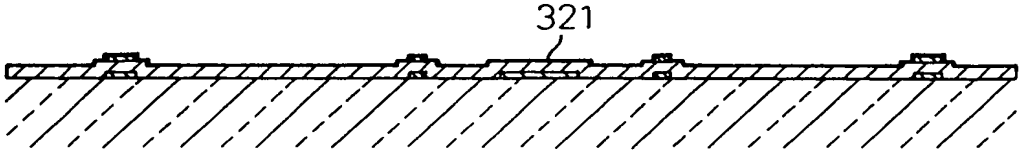


Fig.53F

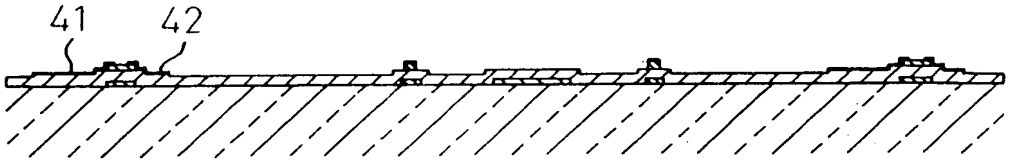


Fig.53G

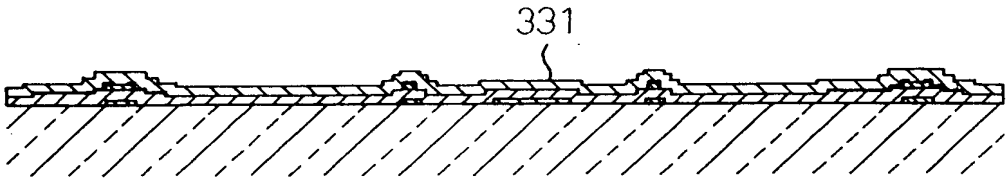


Fig.53H

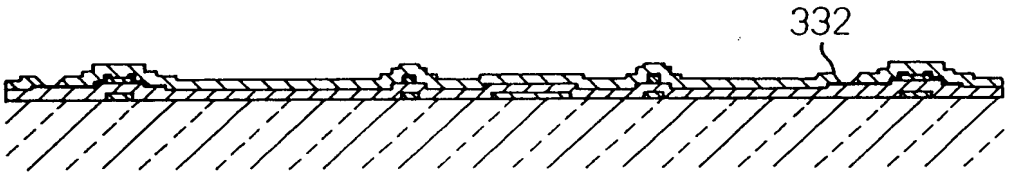


Fig.53I

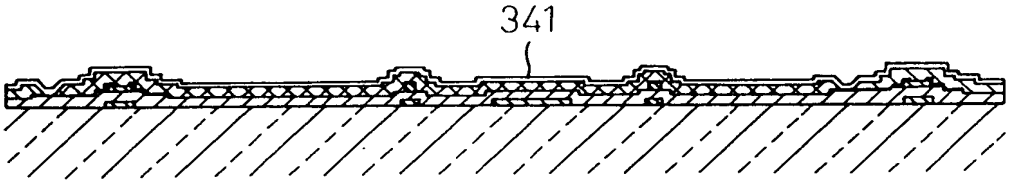


Fig.53J

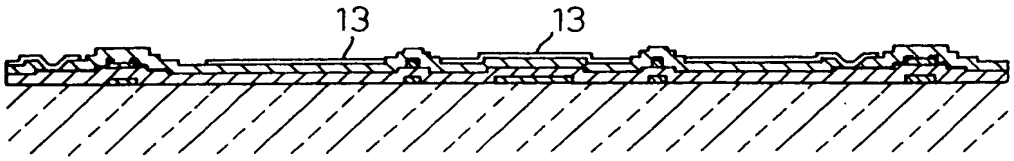


Fig.54

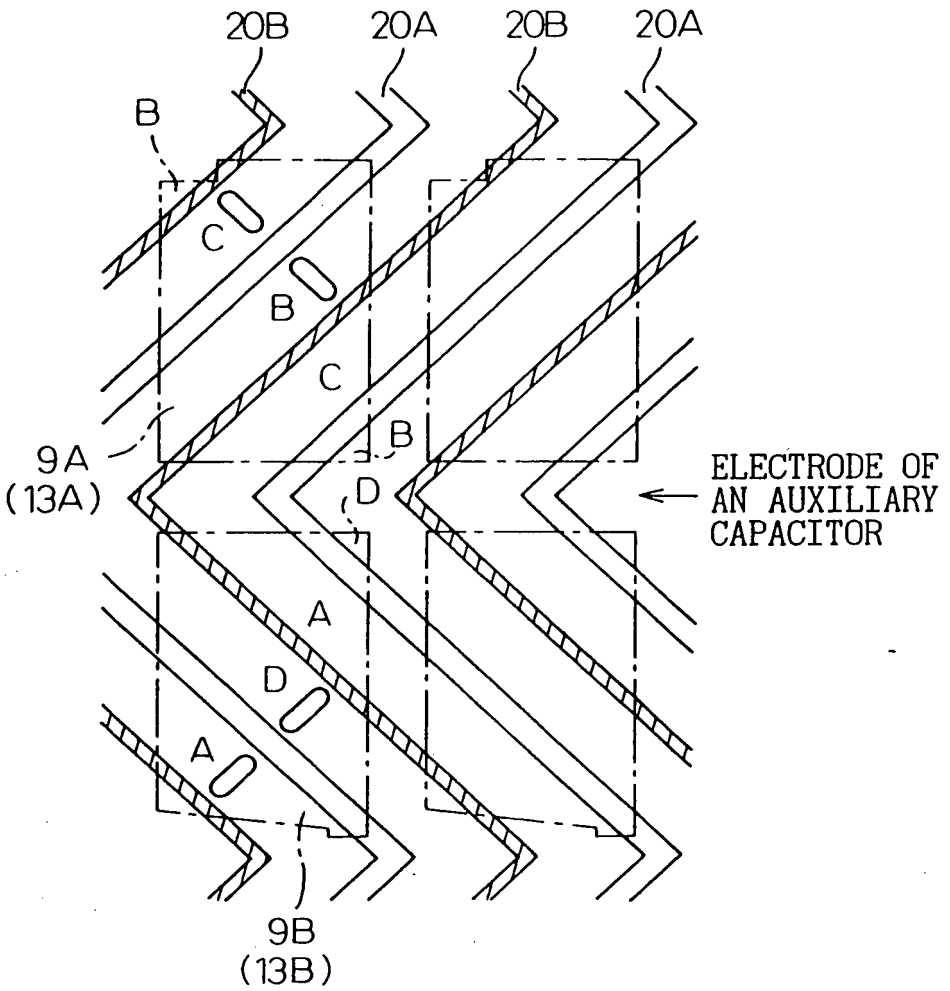

20B
20A
20B
20A
B
C
B
C
B
9A
(13A)
D
ELECTRODE OF
AN AUXILIARY
CAPACITOR
A
D
A
9B
(13B)

Fig.55

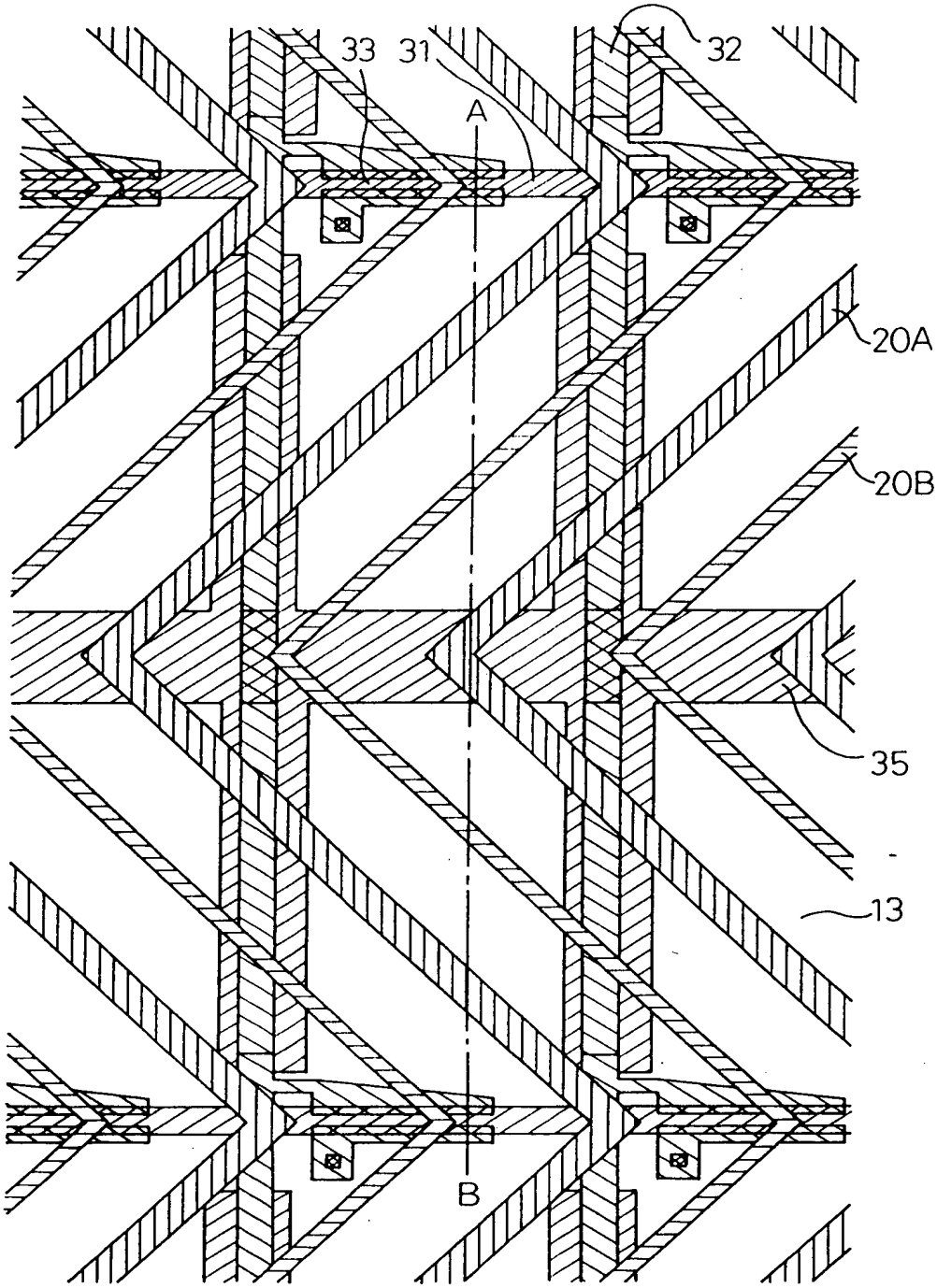


Fig.56

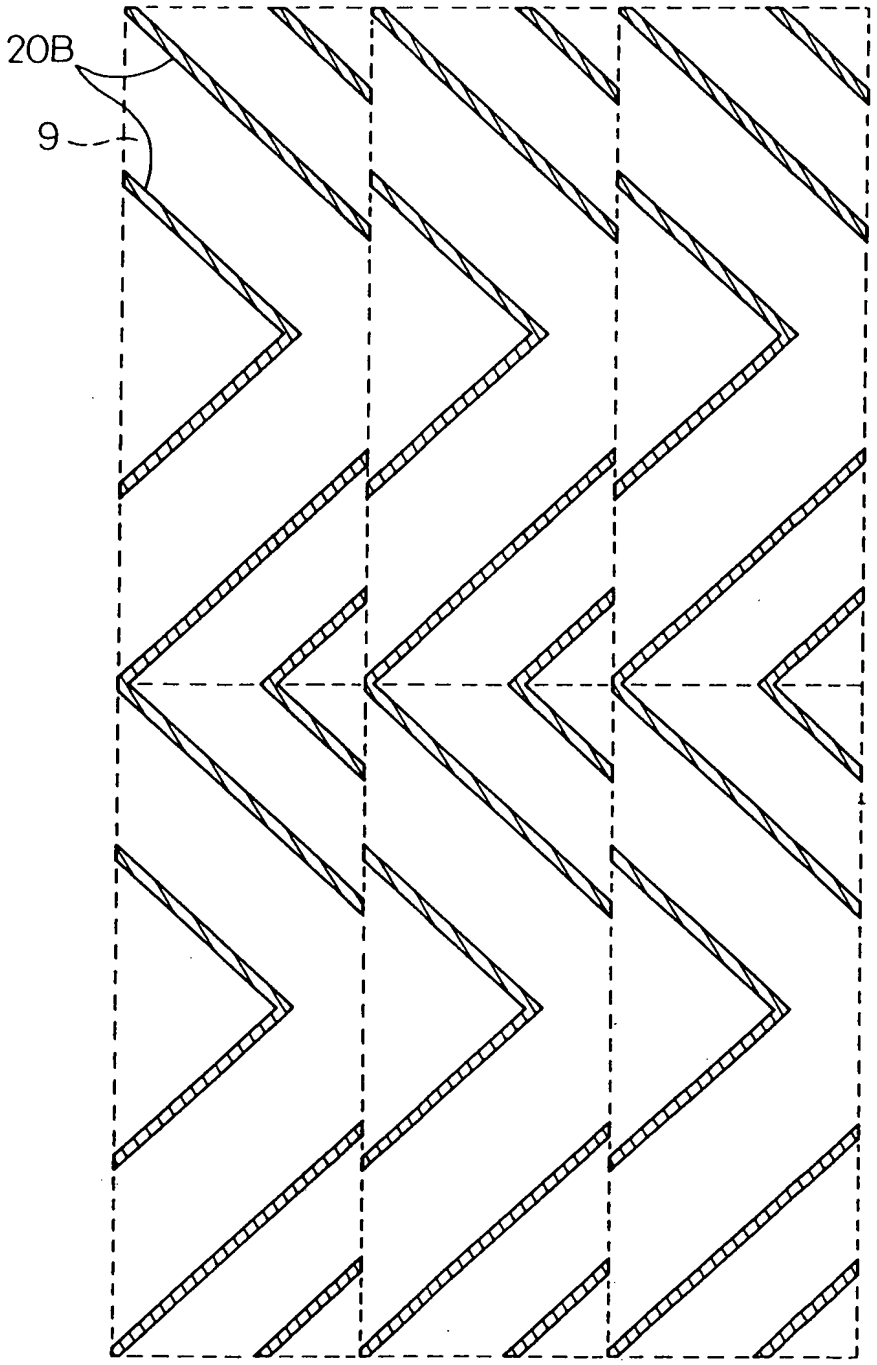


Fig.57A

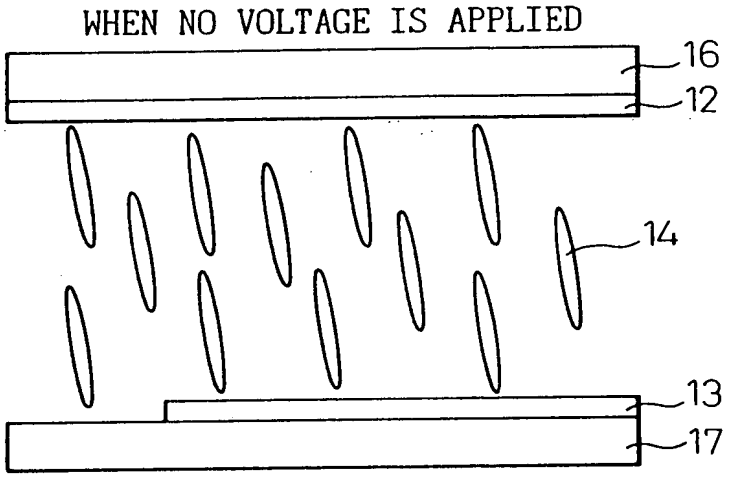


Fig.57B

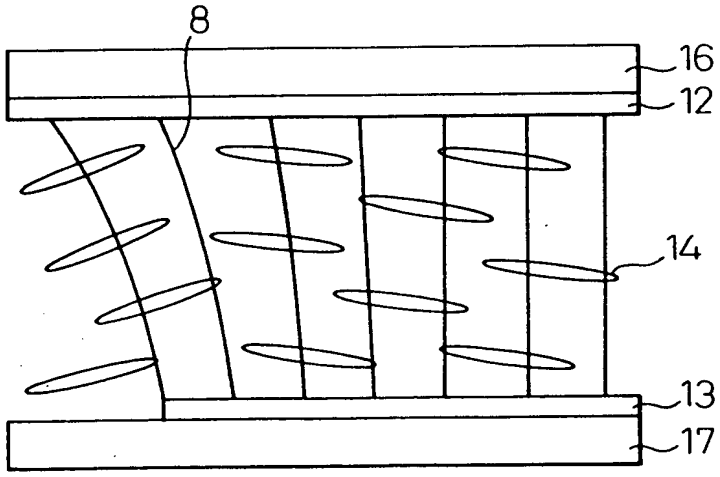


Fig.58

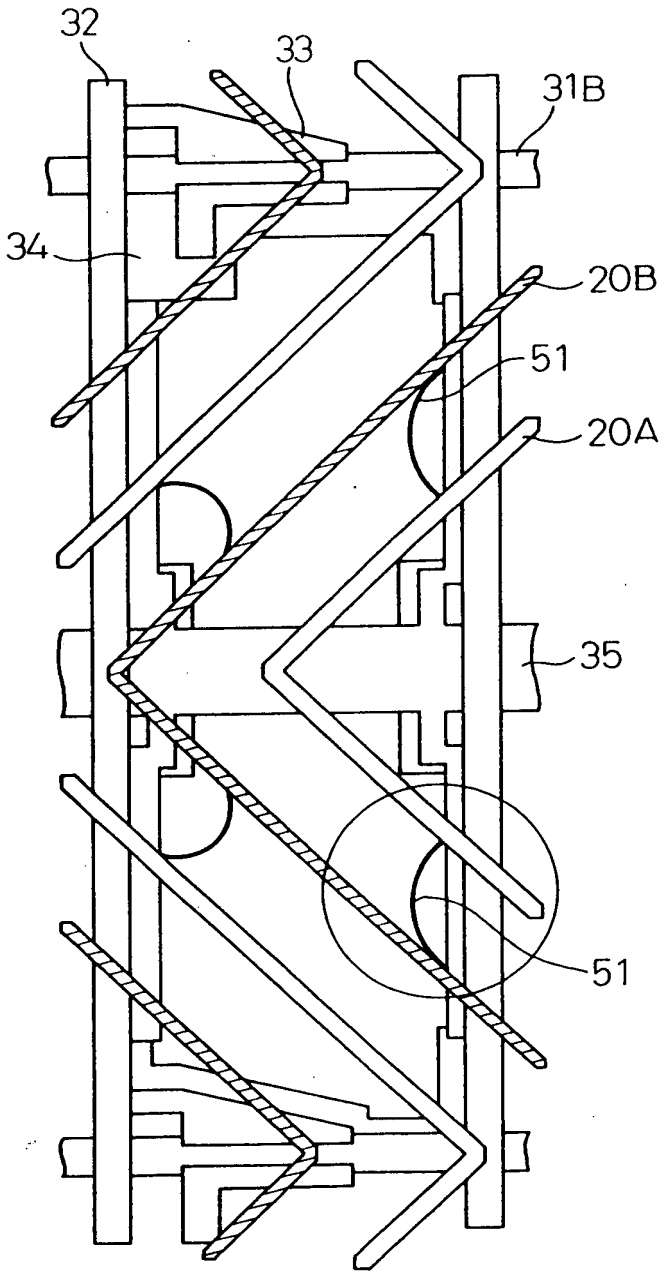


Fig.59

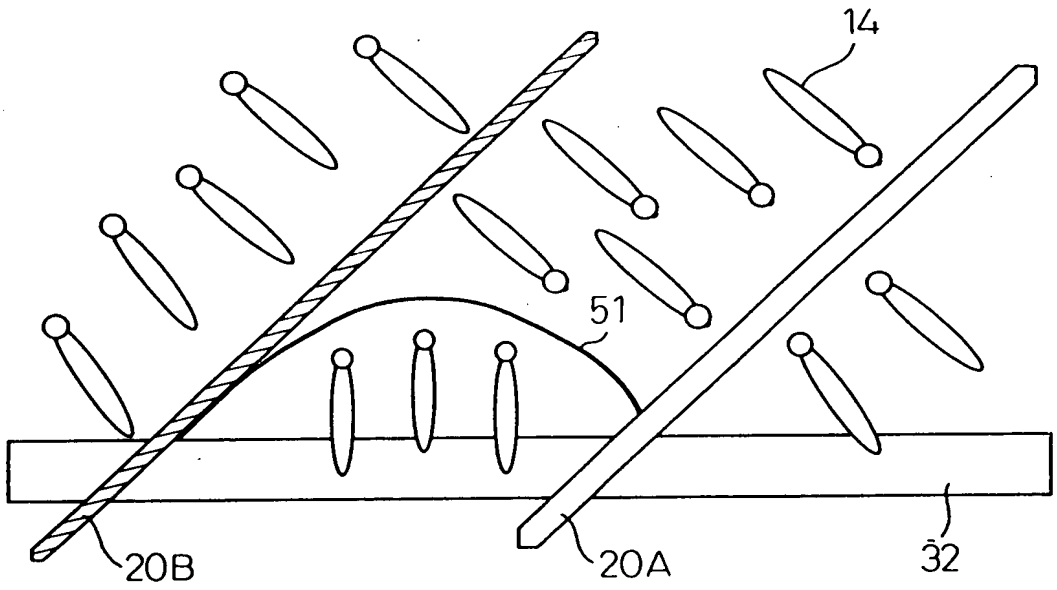


Fig. 60

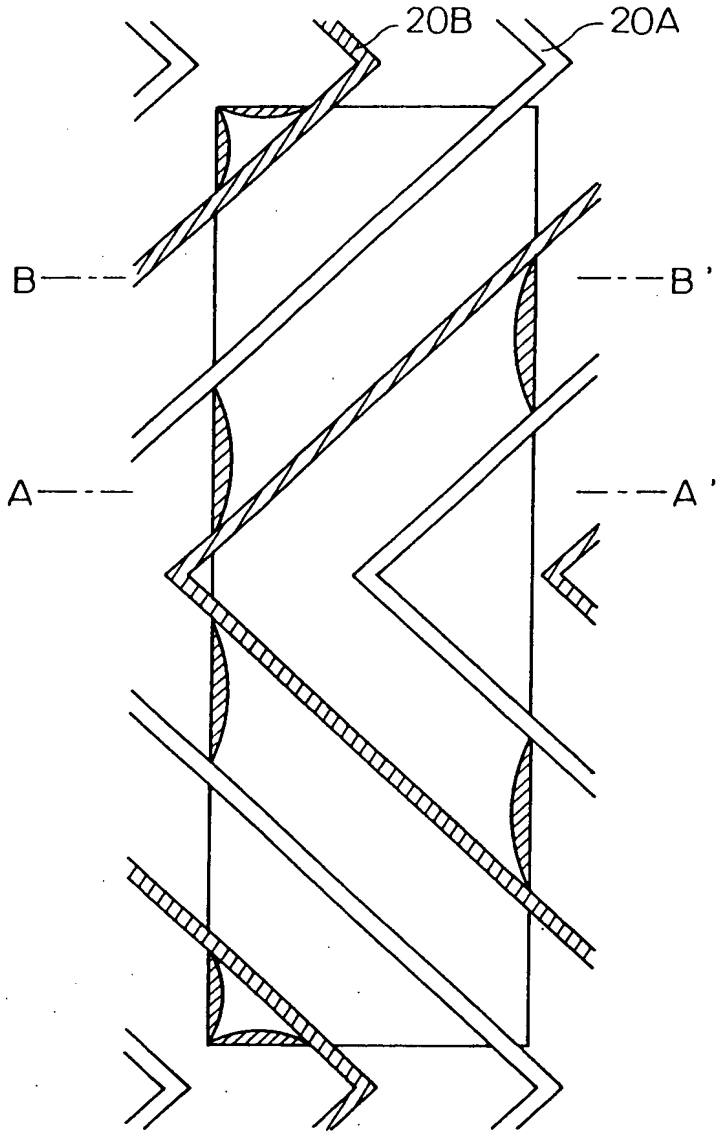


Fig.61A

A－A'

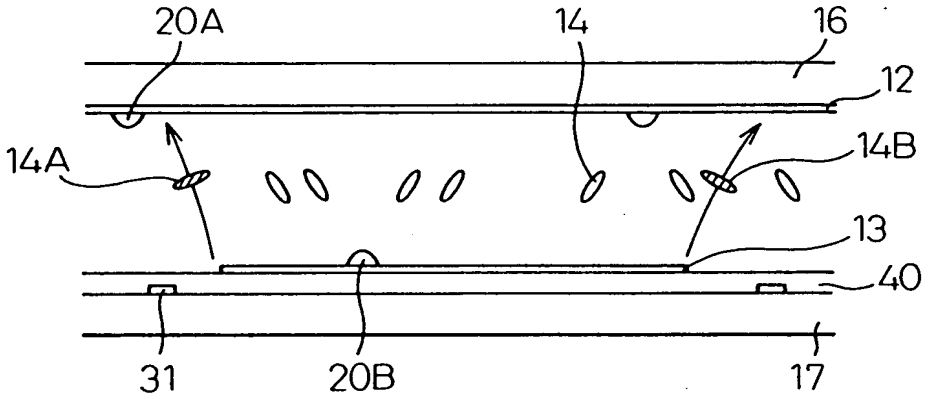


Fig.61B

B－B'

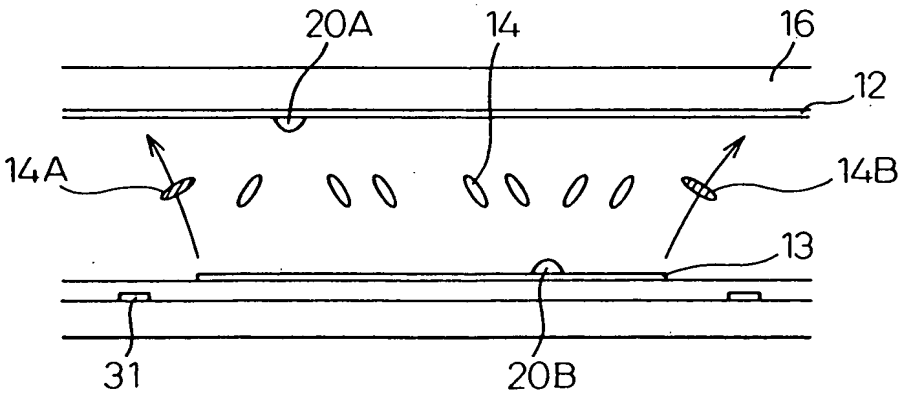


Fig.62A

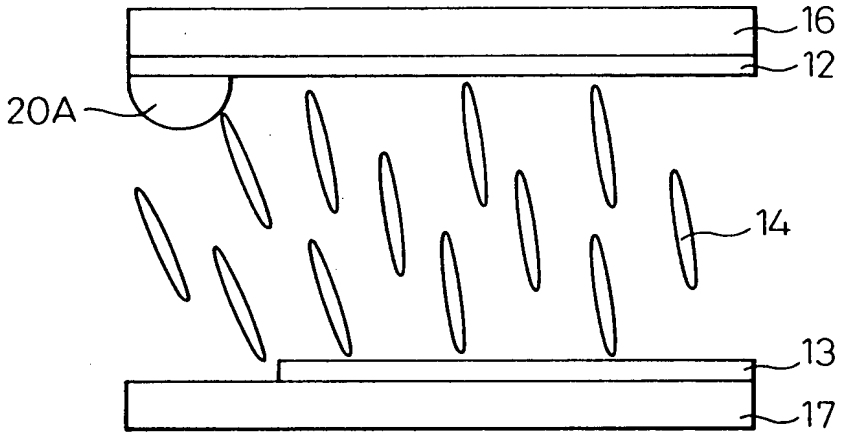


Fig.62B

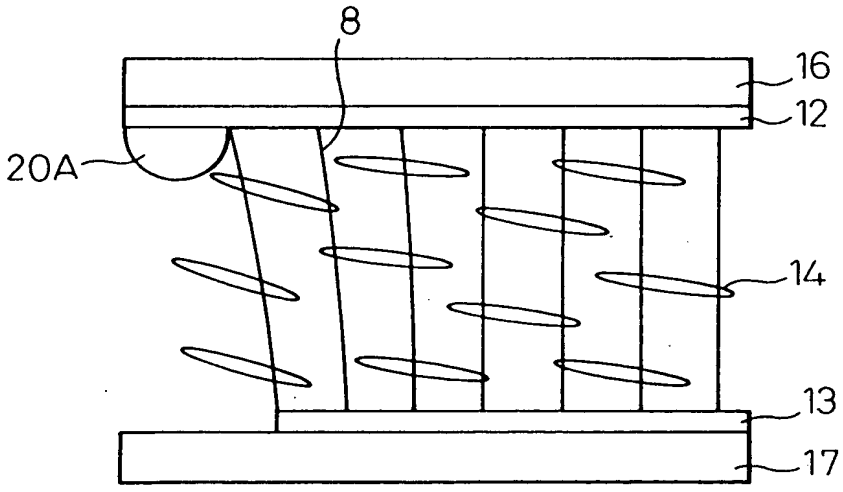


Fig. 63

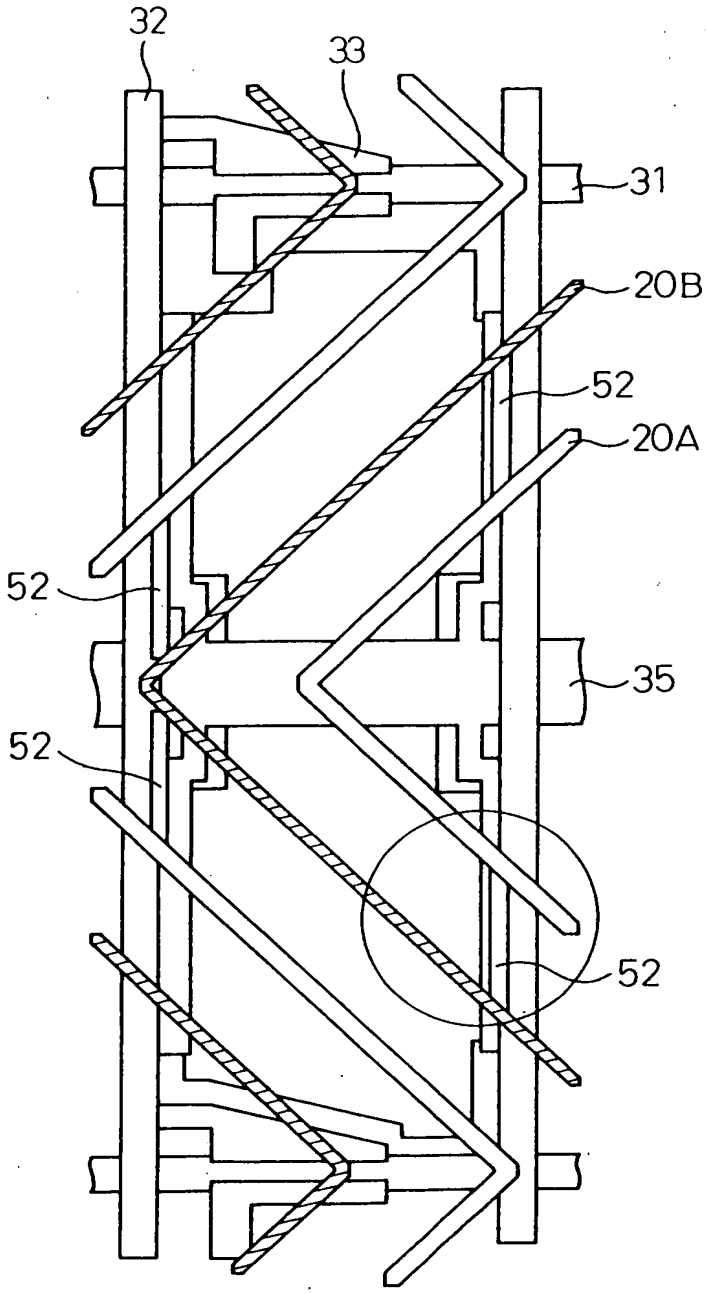


Fig.64

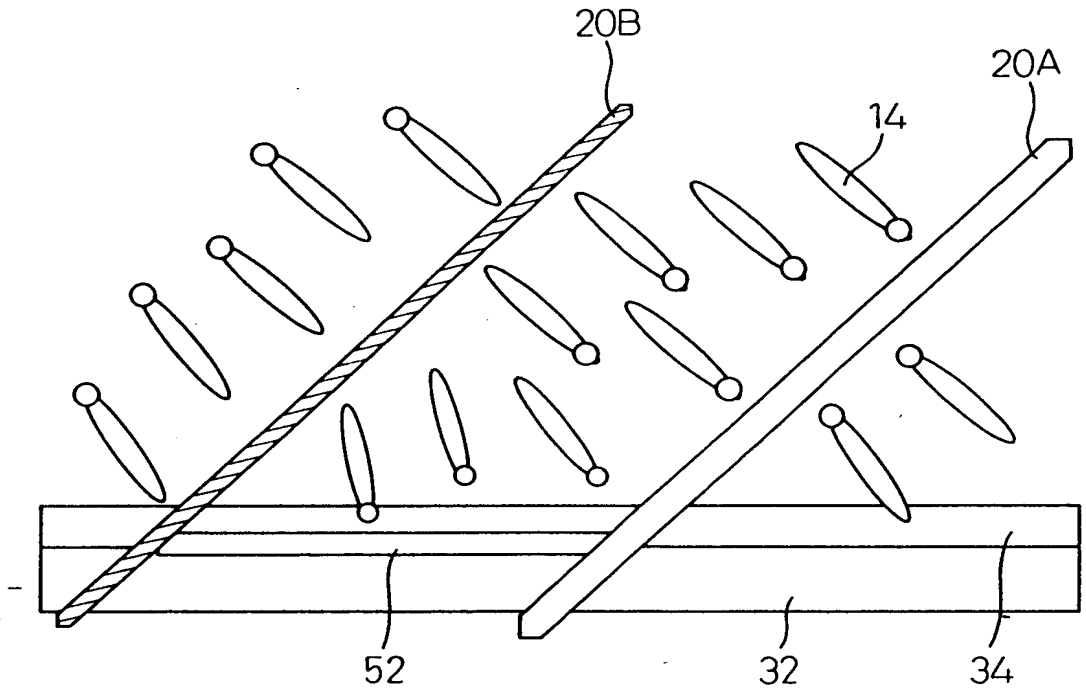


Fig.65A

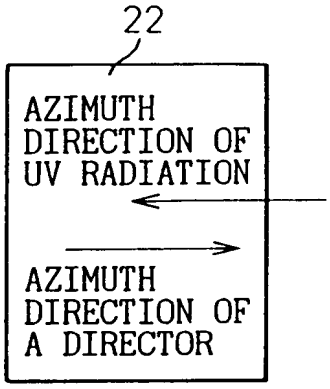


Fig.65B

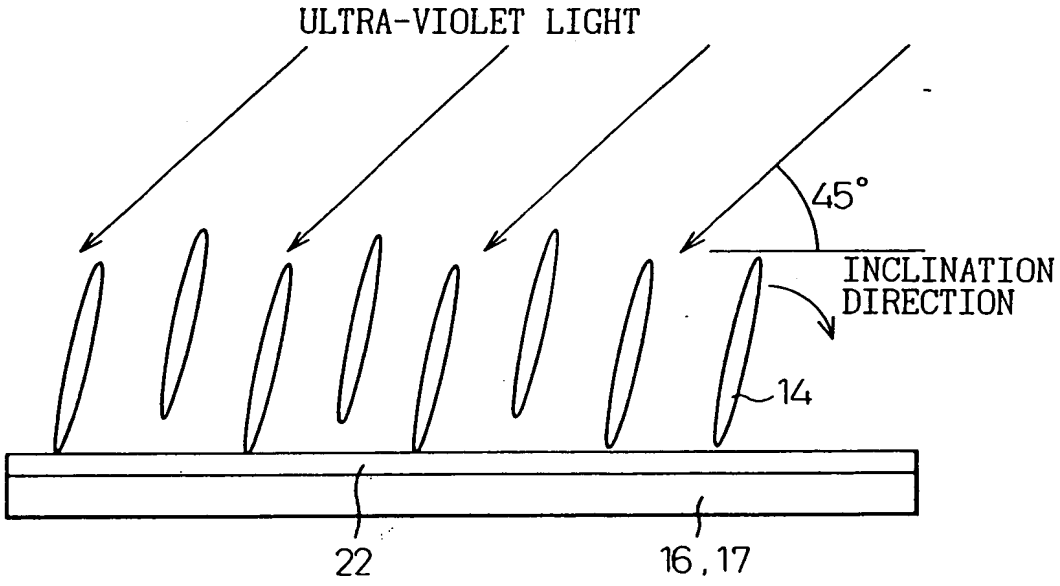


Fig.66

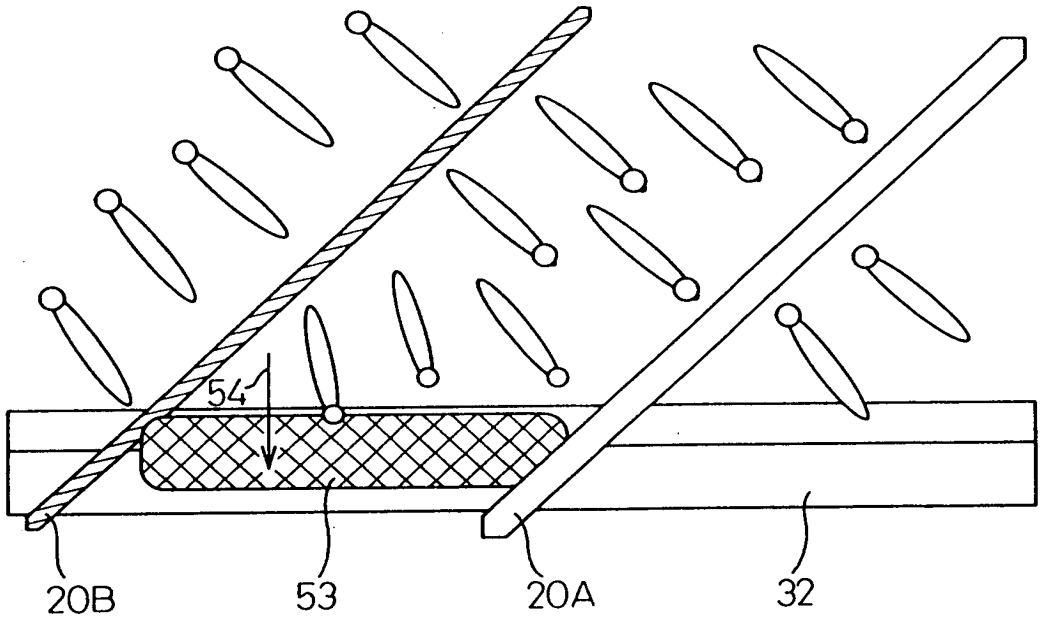


Fig.67A

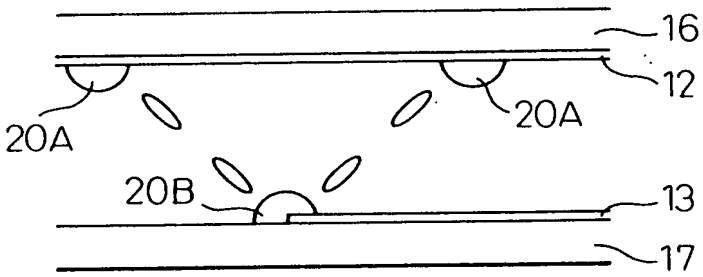


Fig.67B

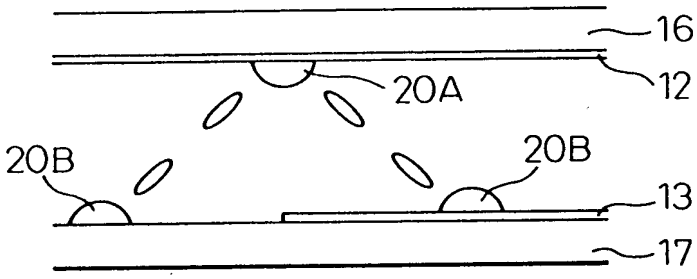


Fig.67C

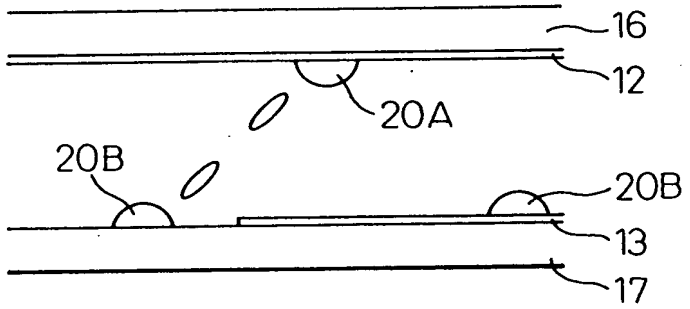


Fig.68

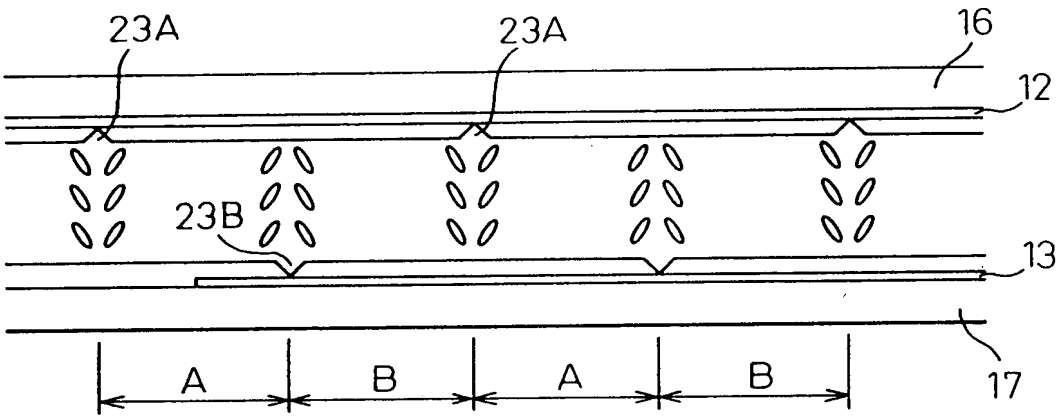


Fig.69A

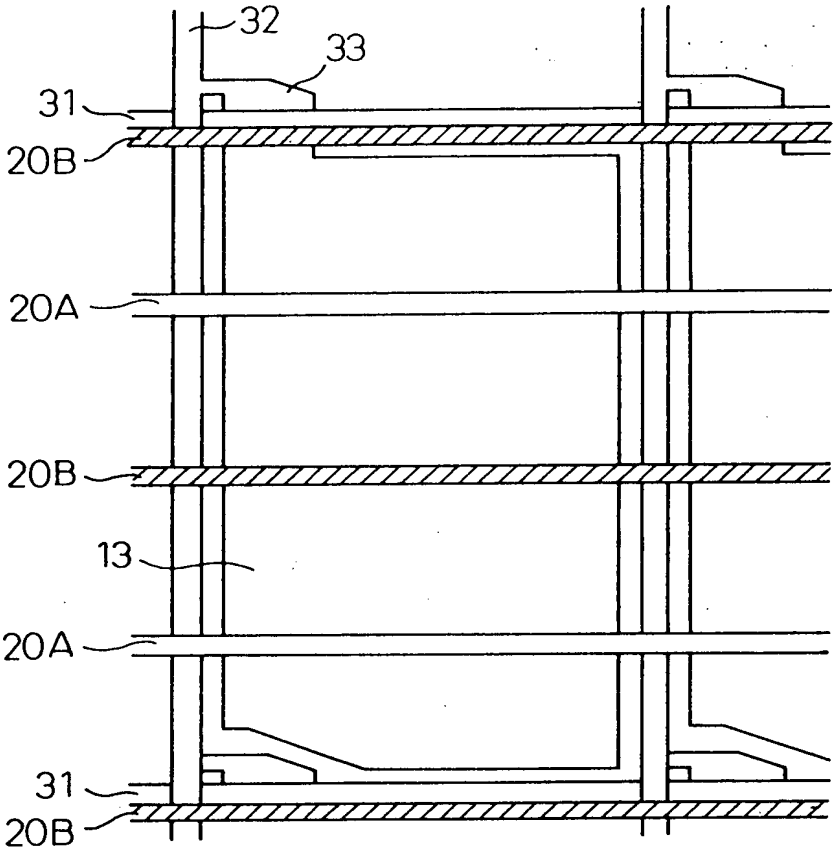


Fig.69B

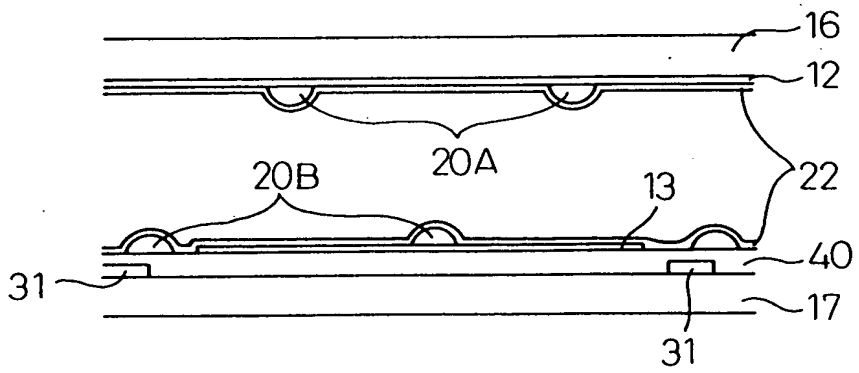


Fig.70A

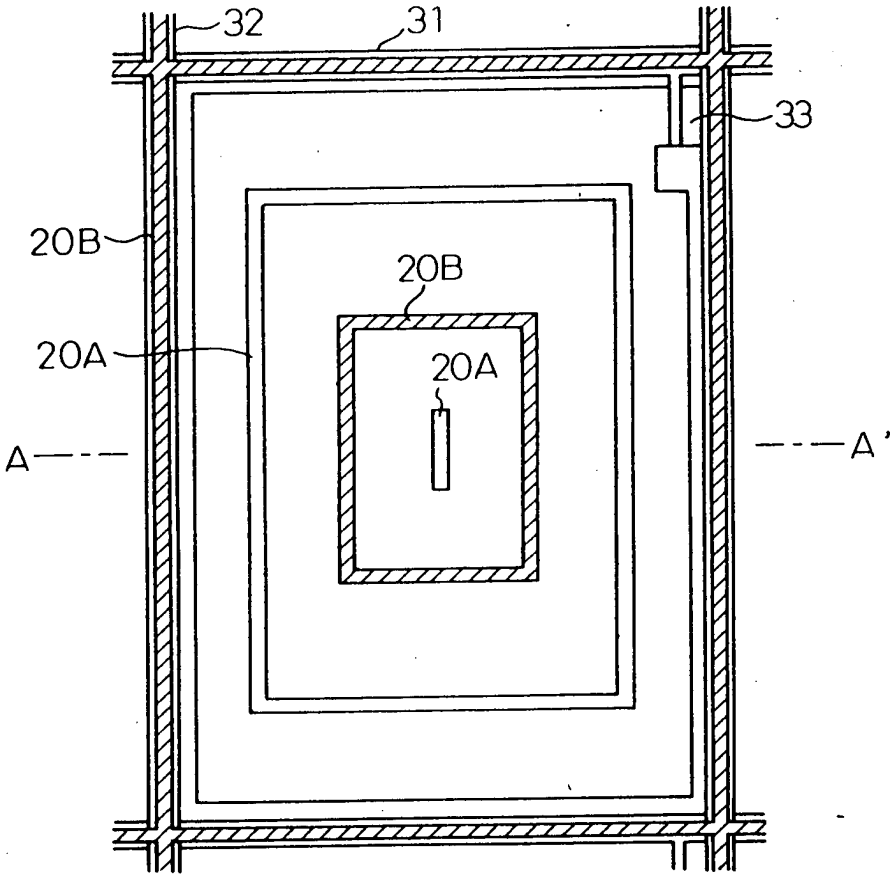


Fig.70B

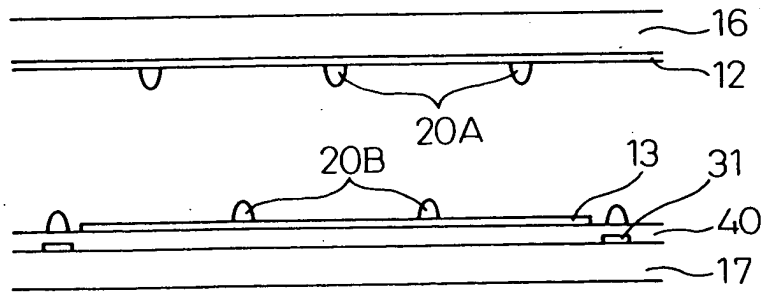


Fig.71

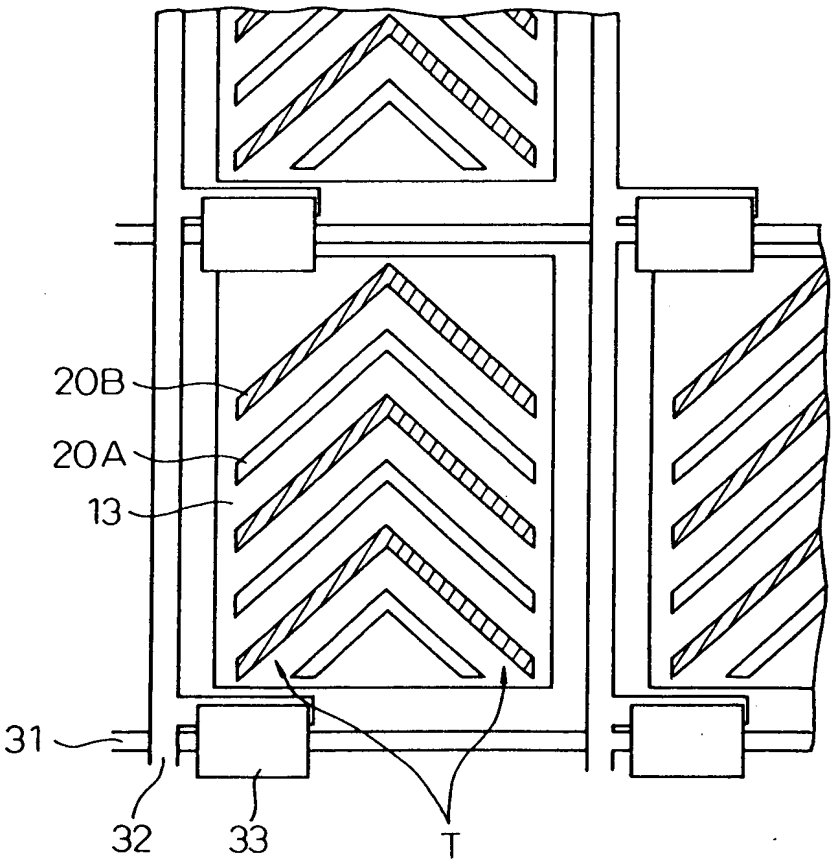


Fig.72

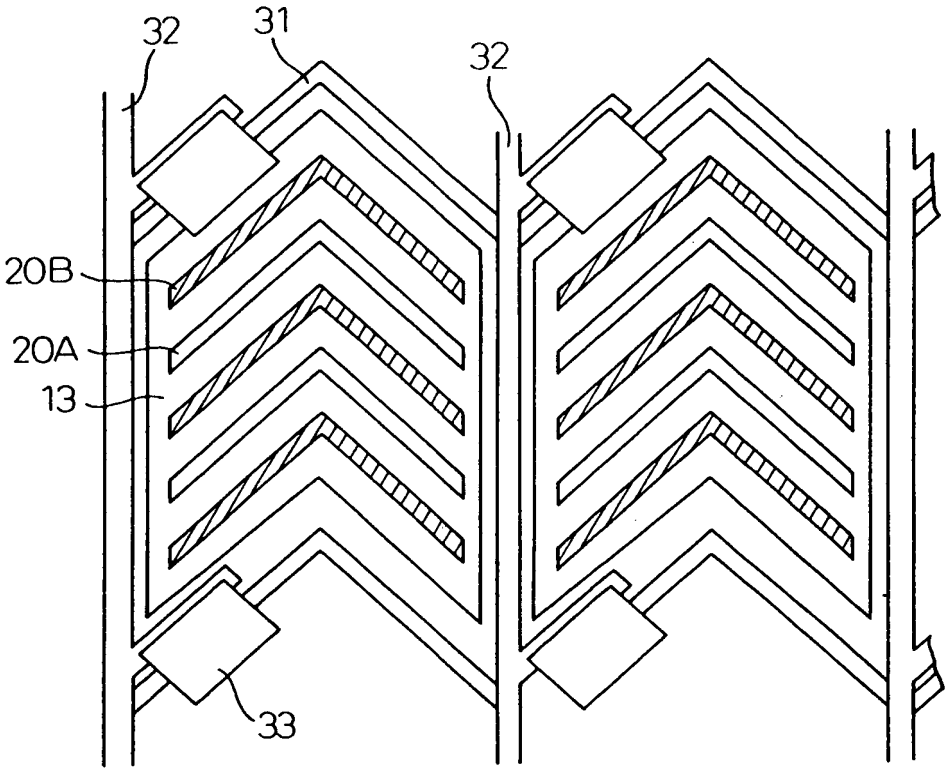


Fig.73

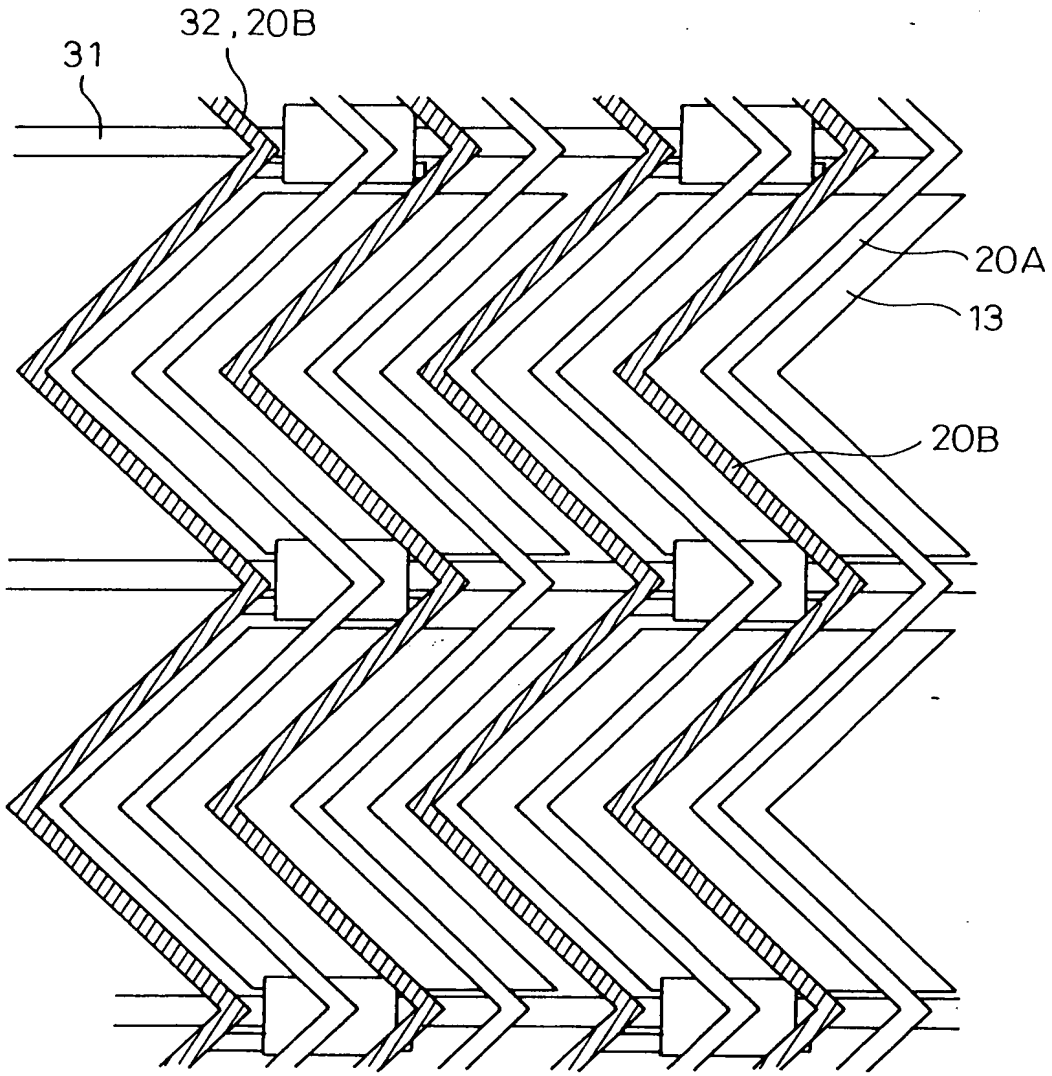


Fig.74

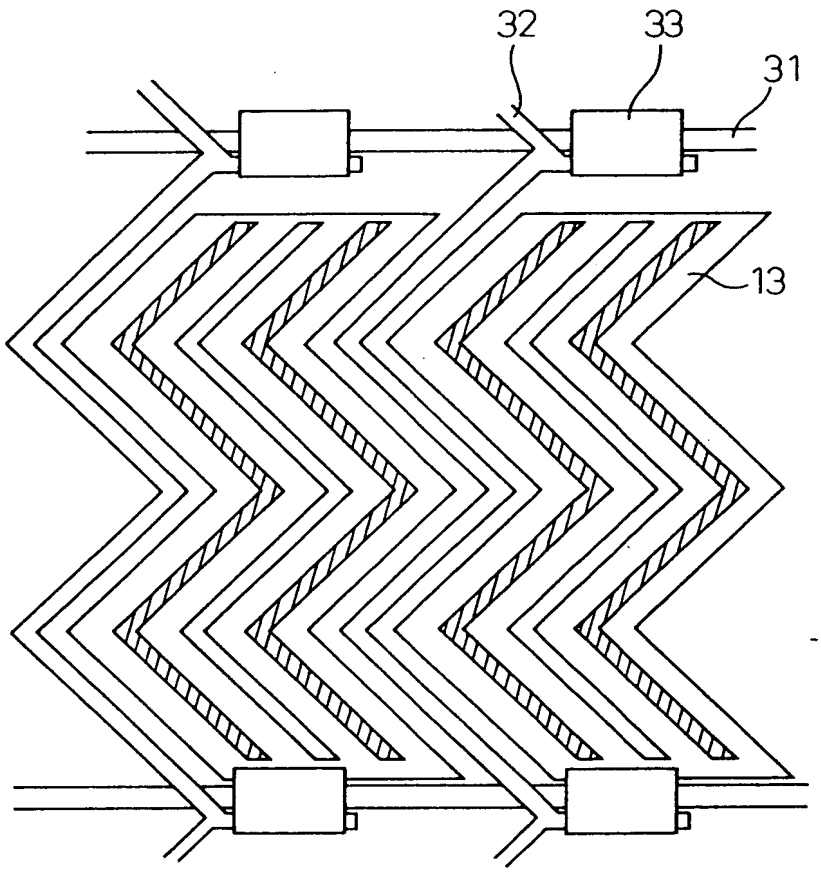


Fig.75

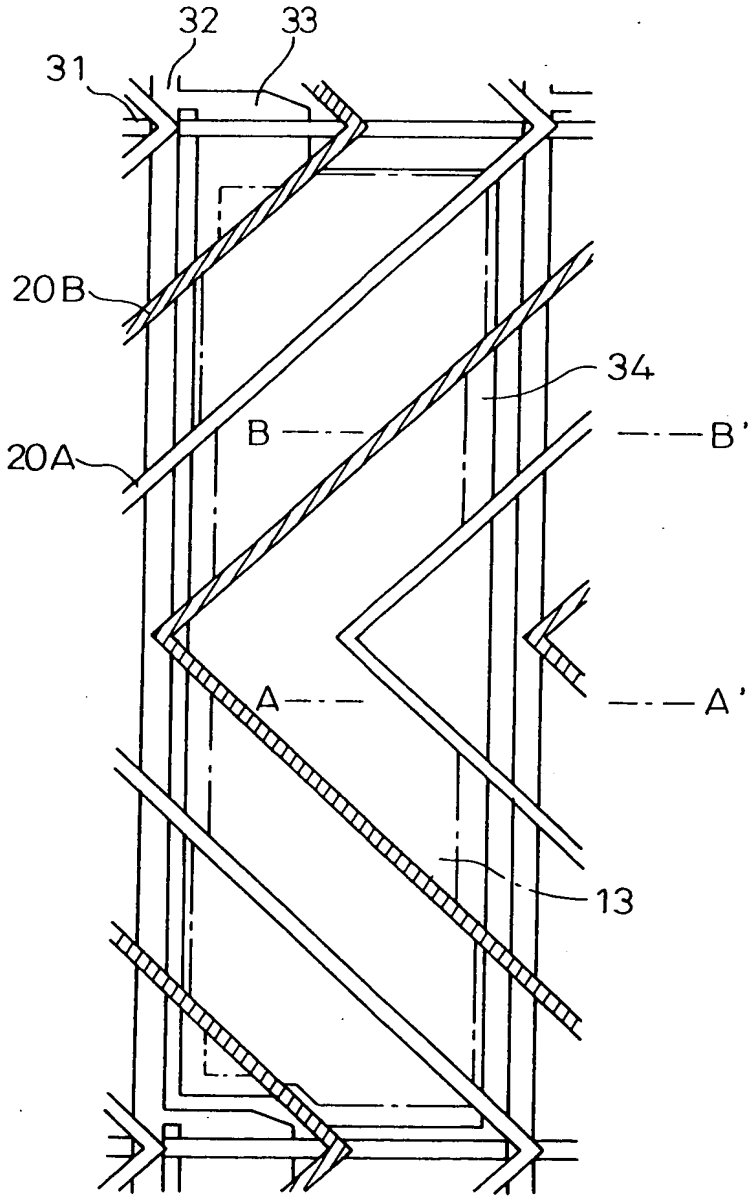


Fig.76A

A-A'

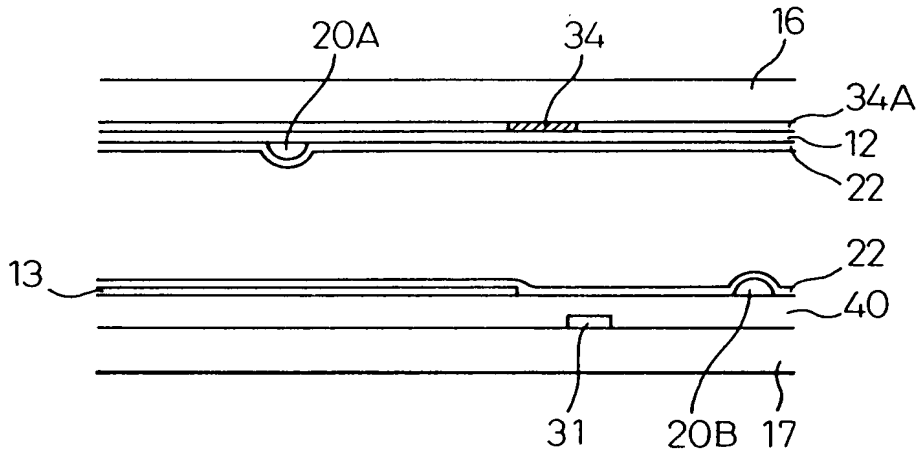


Fig.76B

B-B'

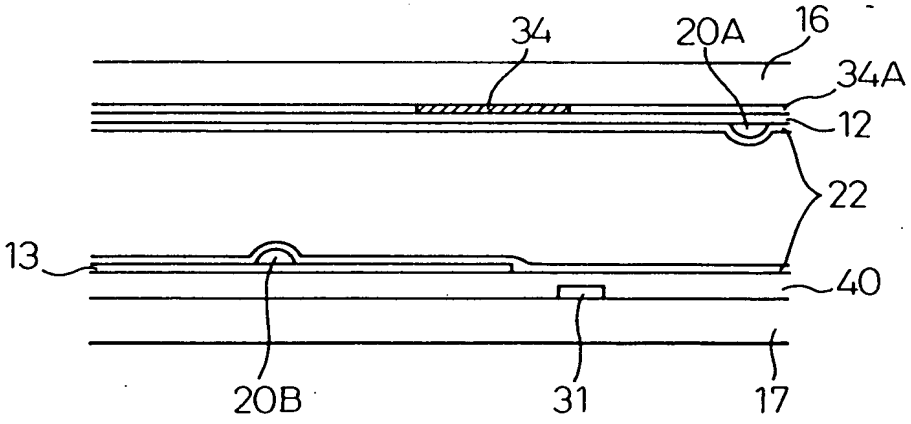


Fig.77A

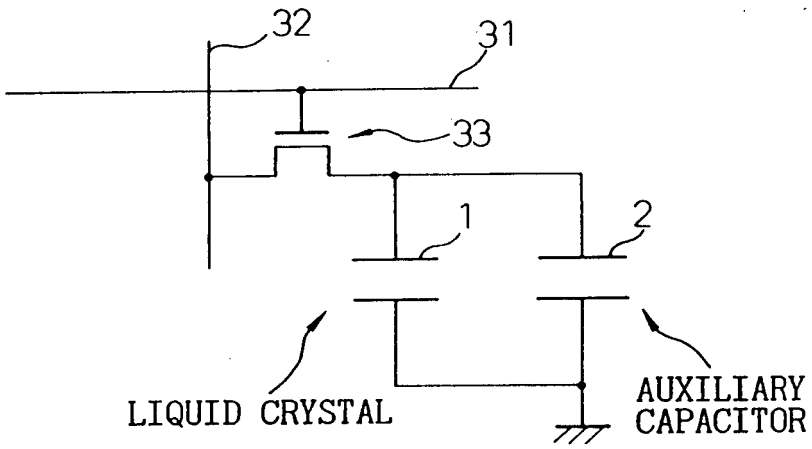


Fig.77B

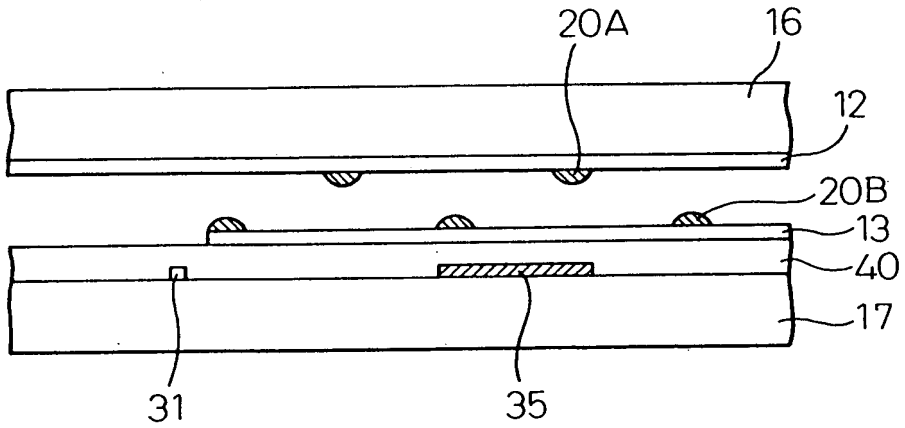


Fig.78A

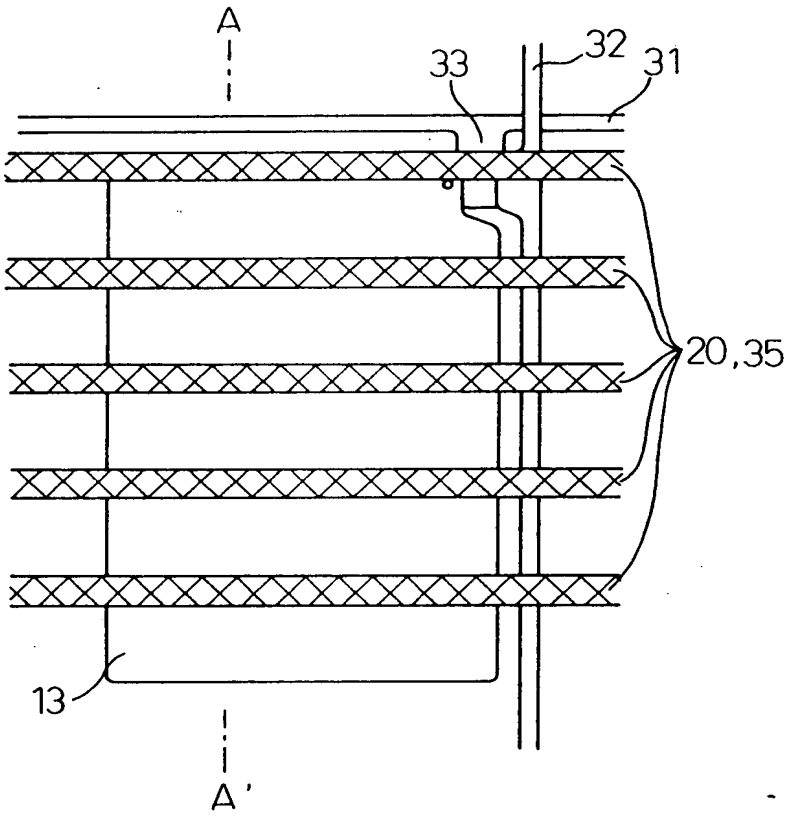


Fig.78B

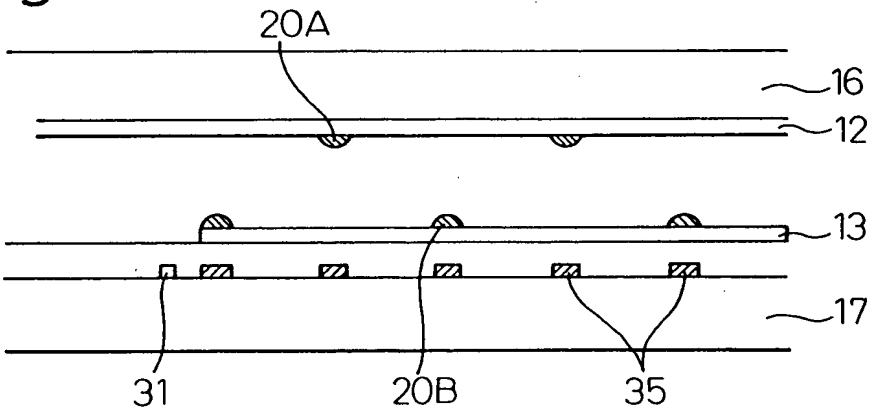


Fig.79A

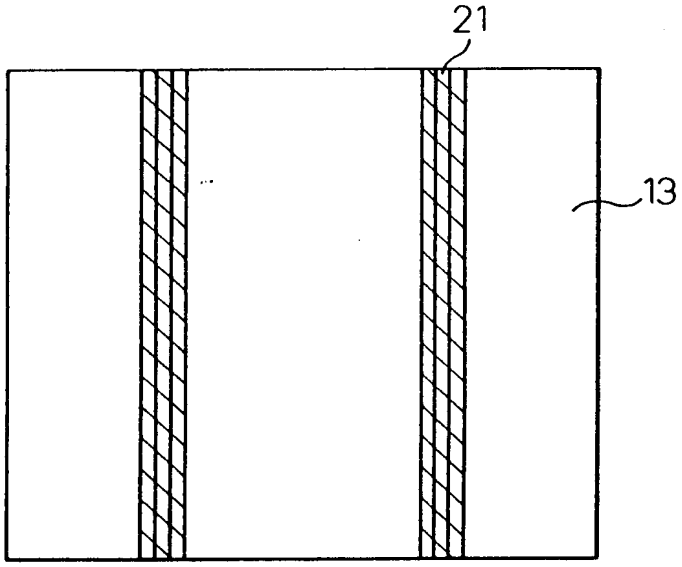


Fig.79B

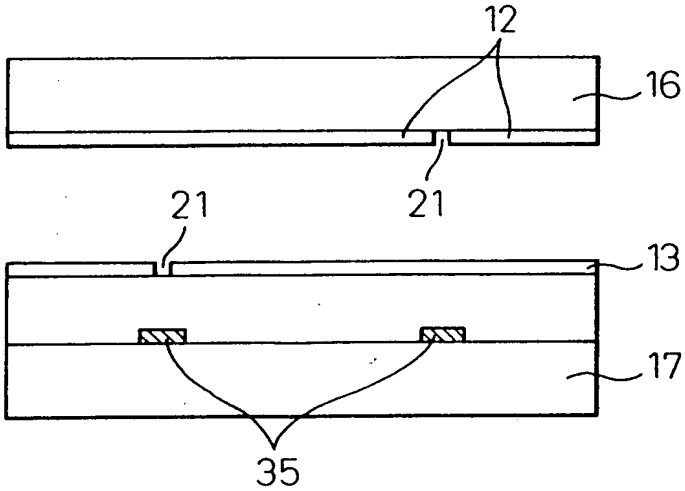


Fig.80A

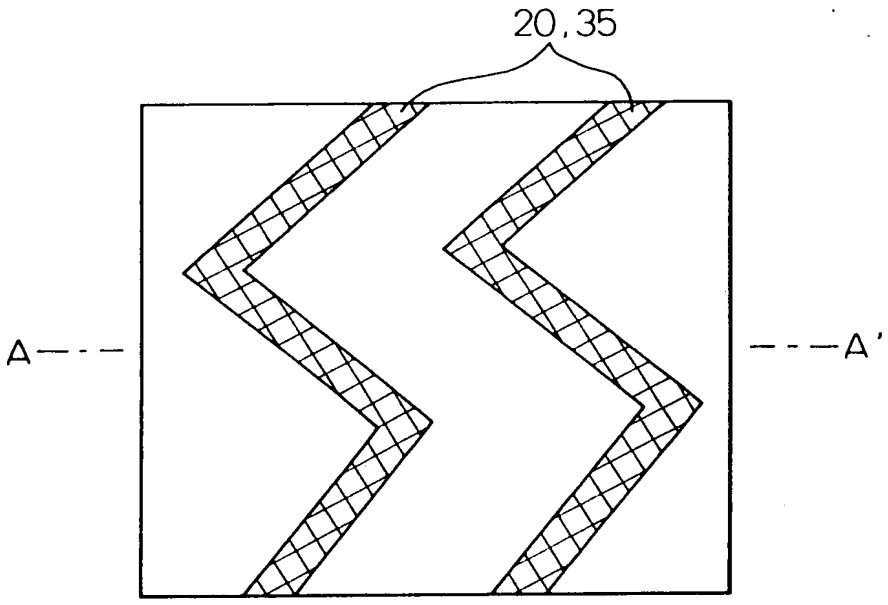


Fig.80B

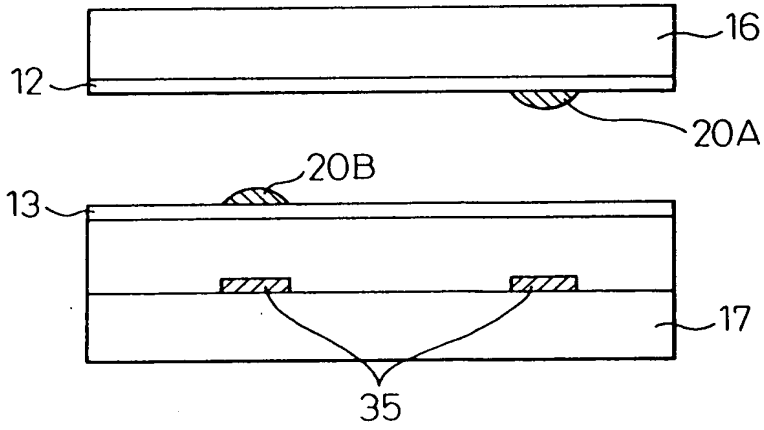


Fig.81A

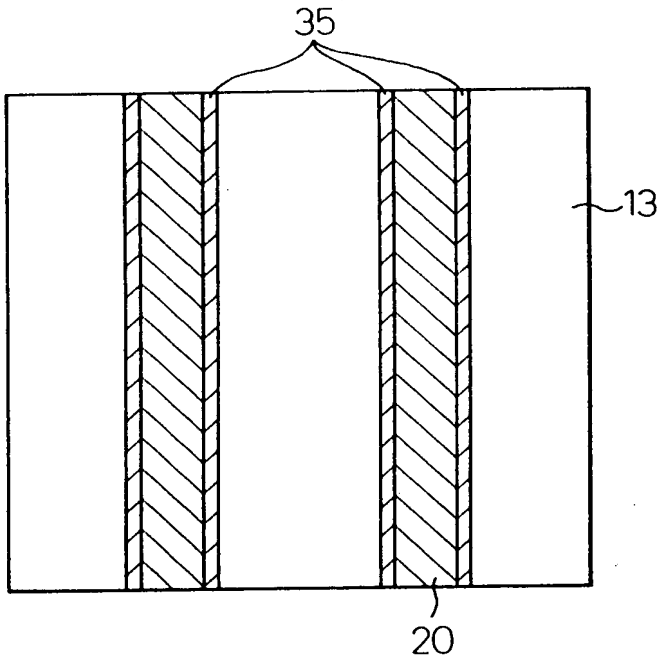


Fig.81B

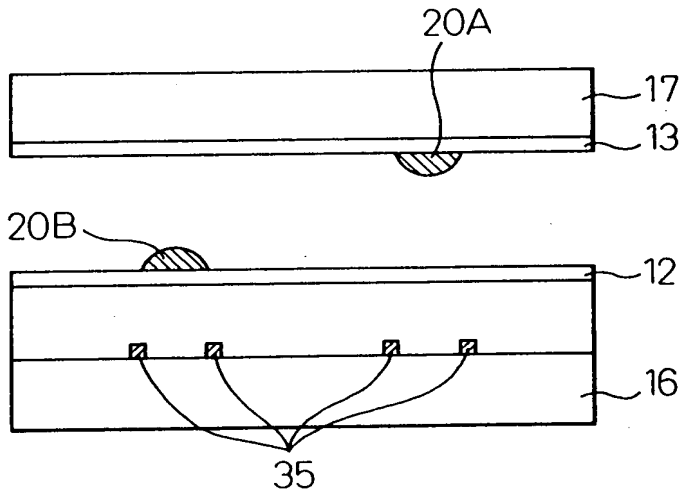


Fig. 82

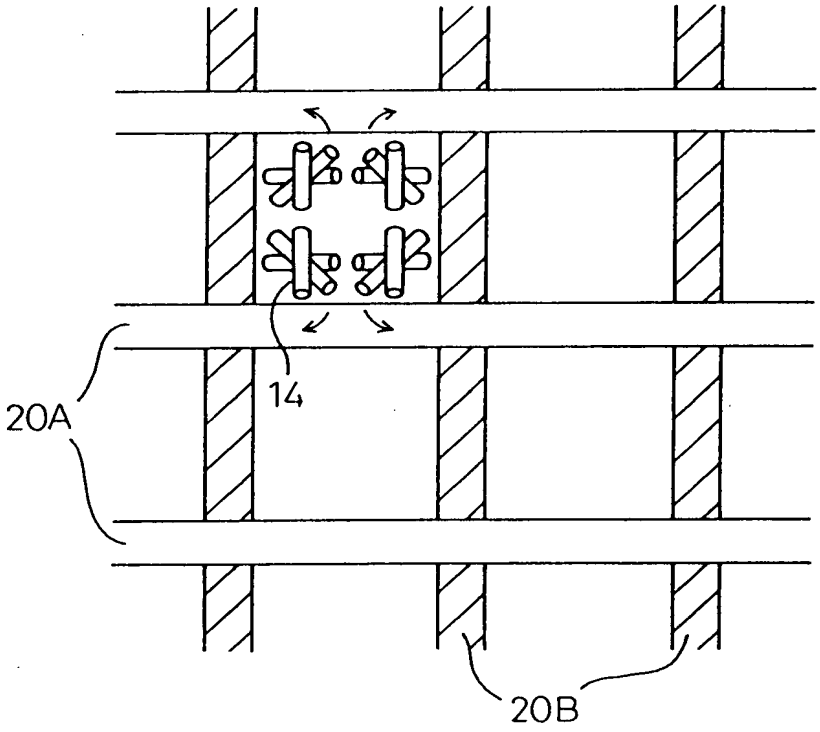


Fig.83A

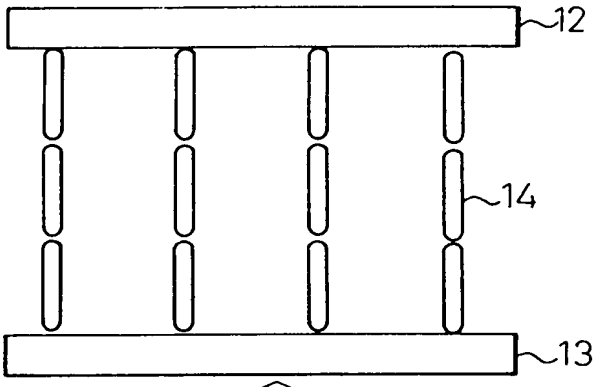


Fig.83B

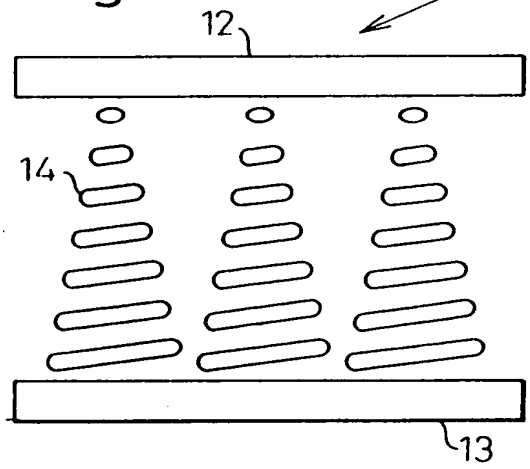


Fig.83C

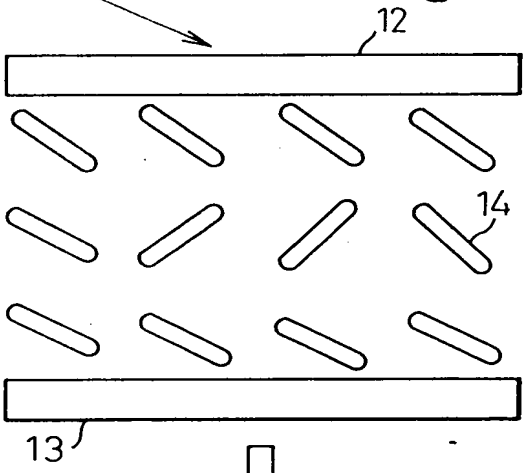


Fig.83D

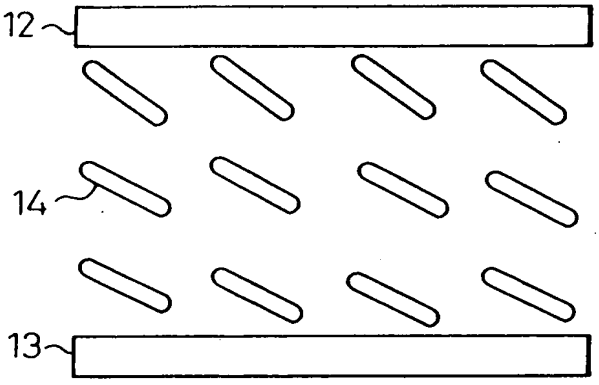


Fig.84

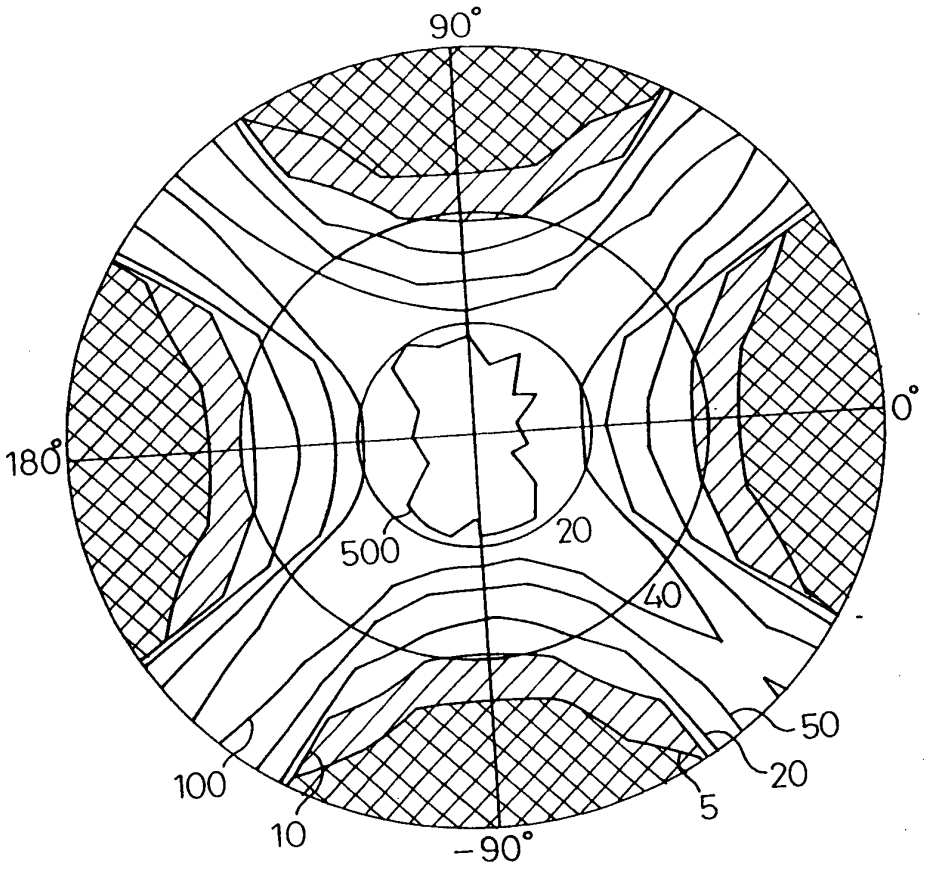


Fig.85A

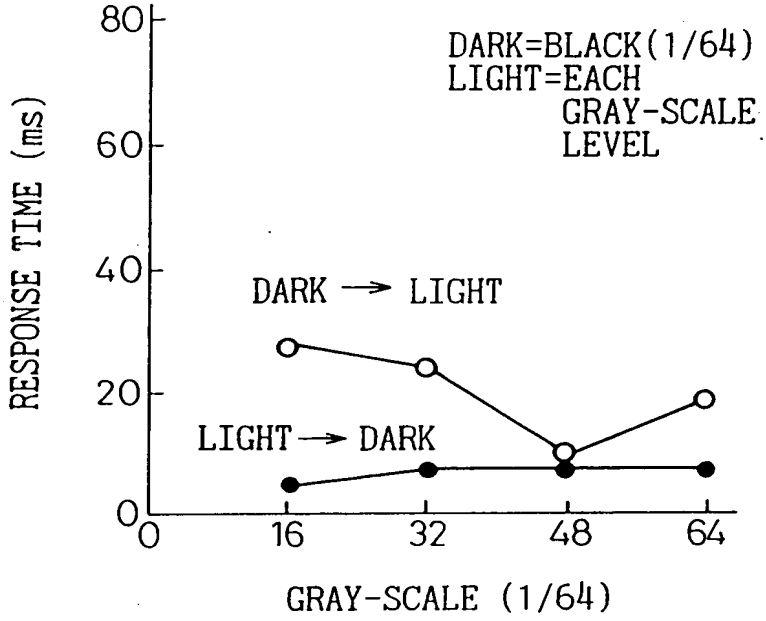


Fig.85B

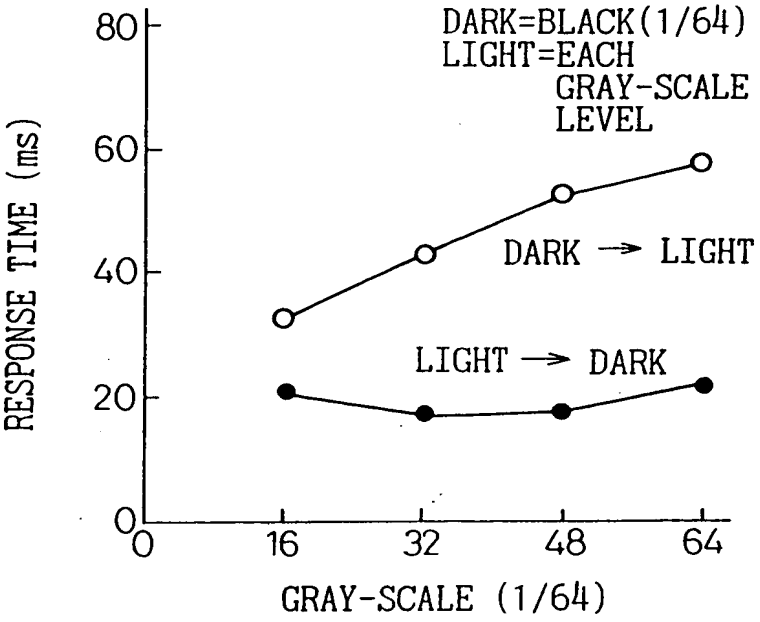


Fig.85C

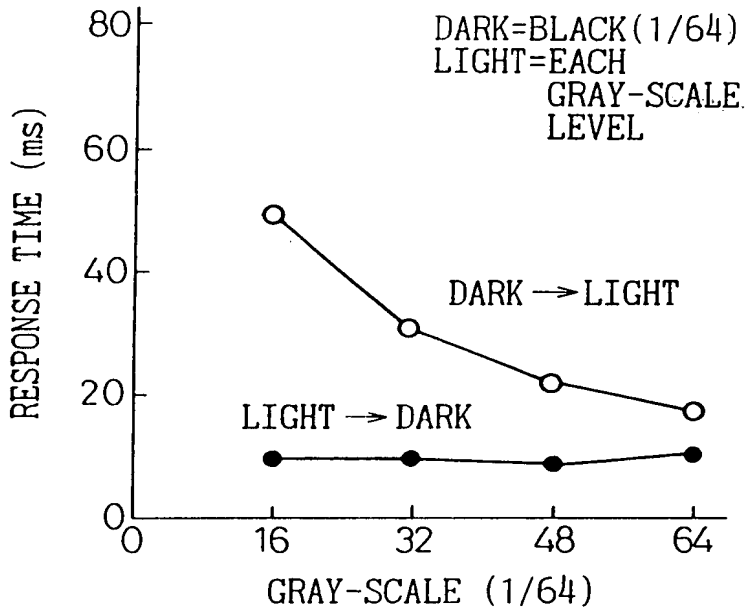


Fig.85D

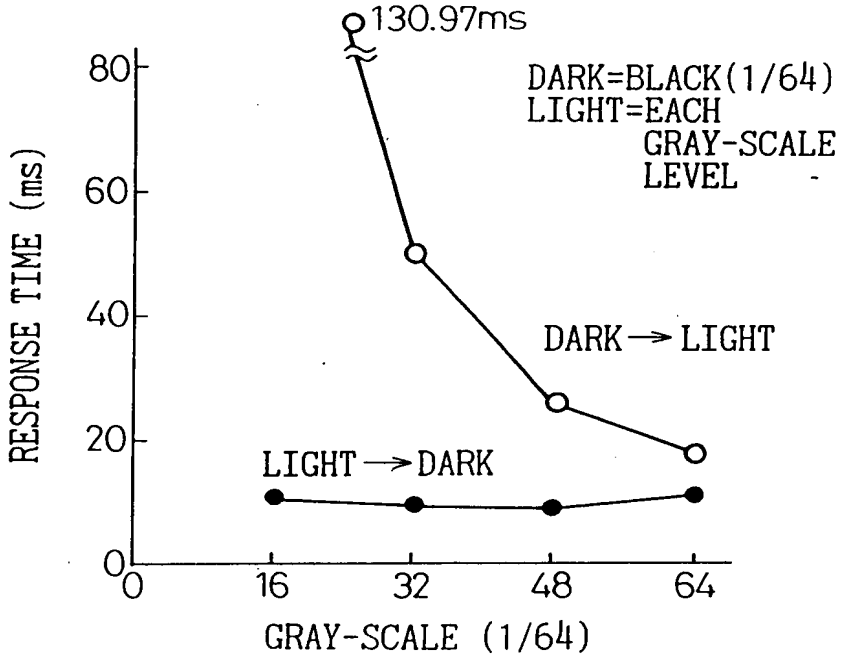


Fig.86A

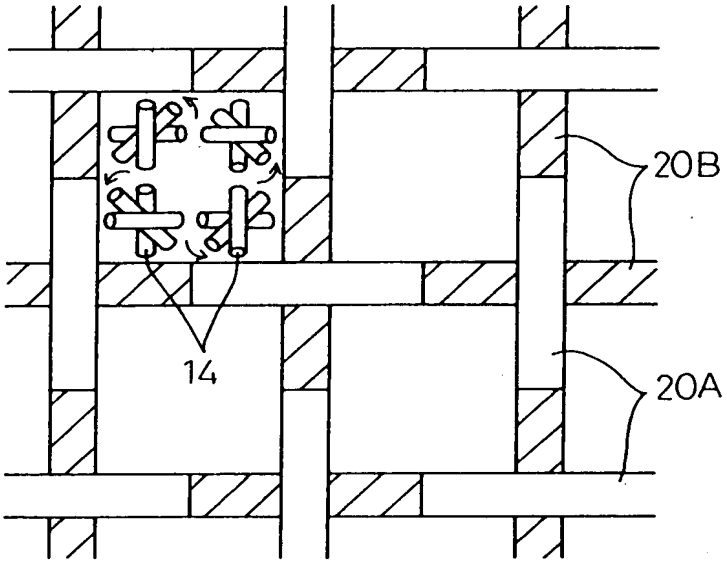


Fig.86B

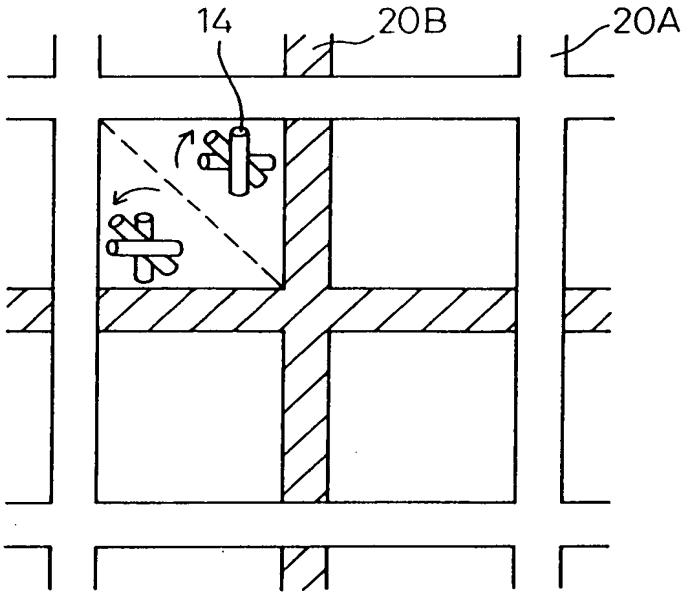


Fig.87

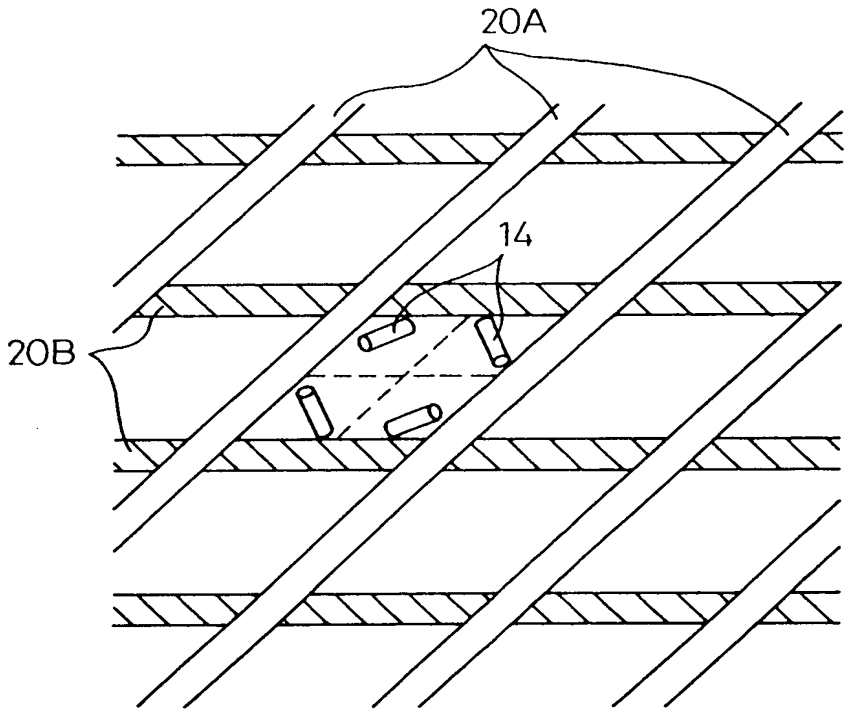


Fig.88

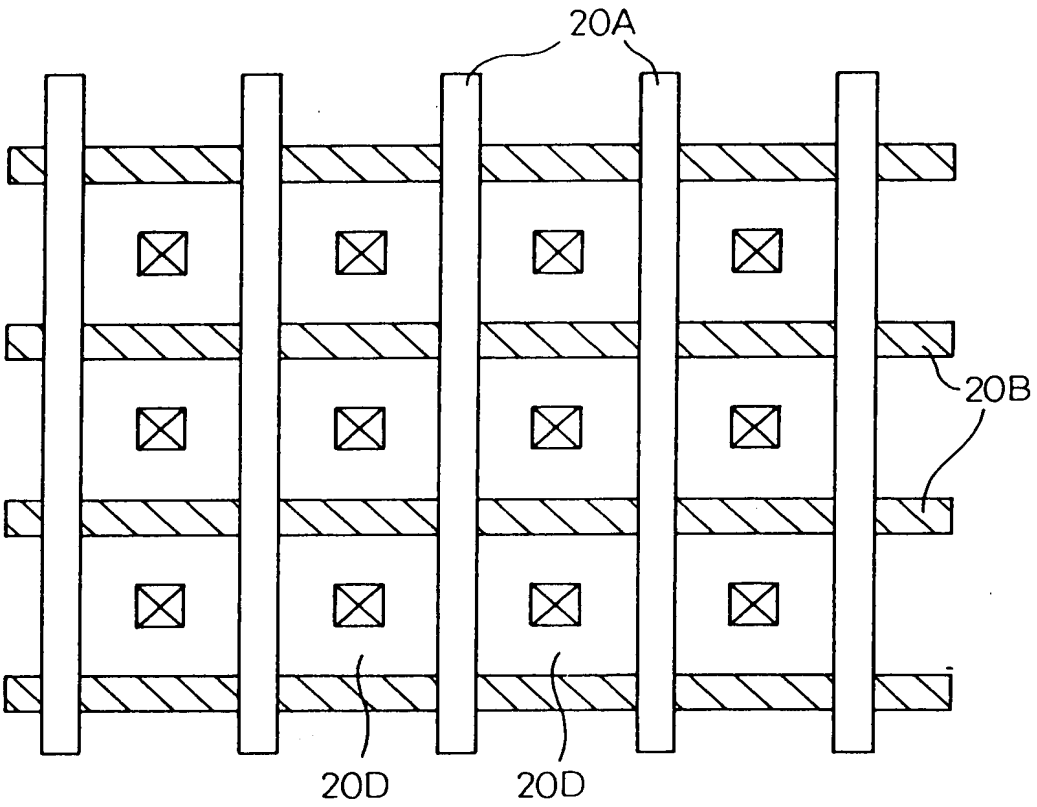


Fig.89

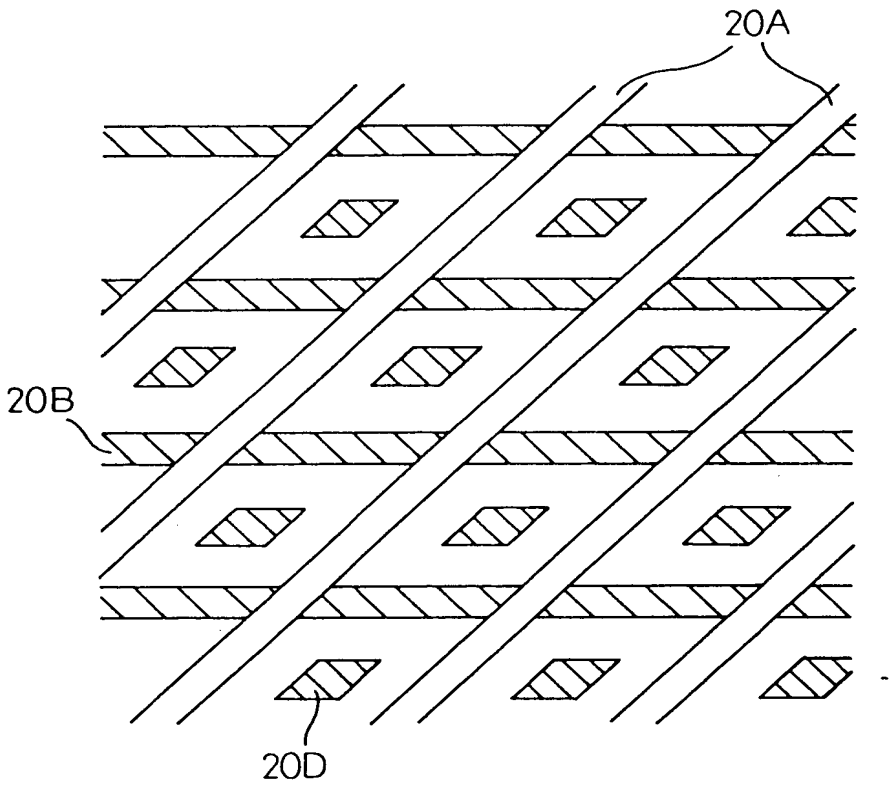


Fig.90A

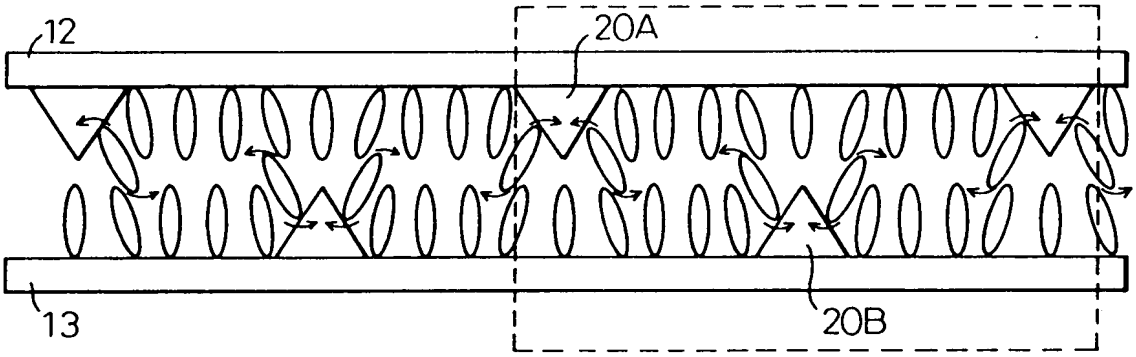


Fig.90B

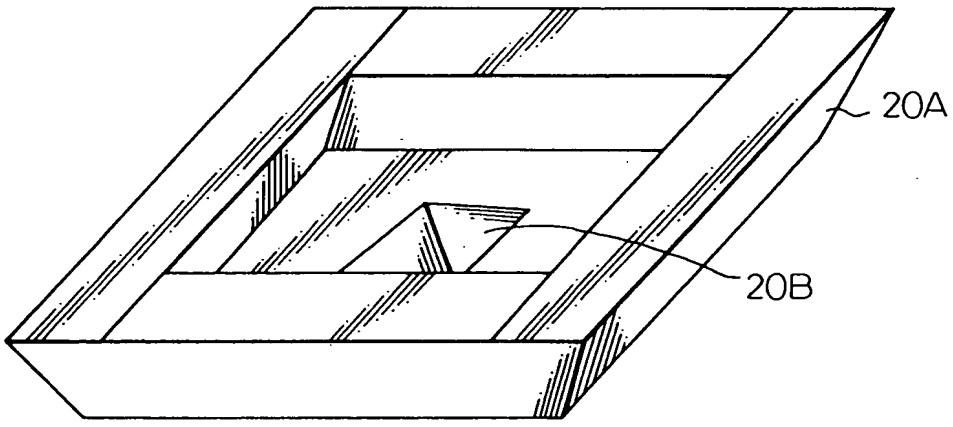


Fig.91

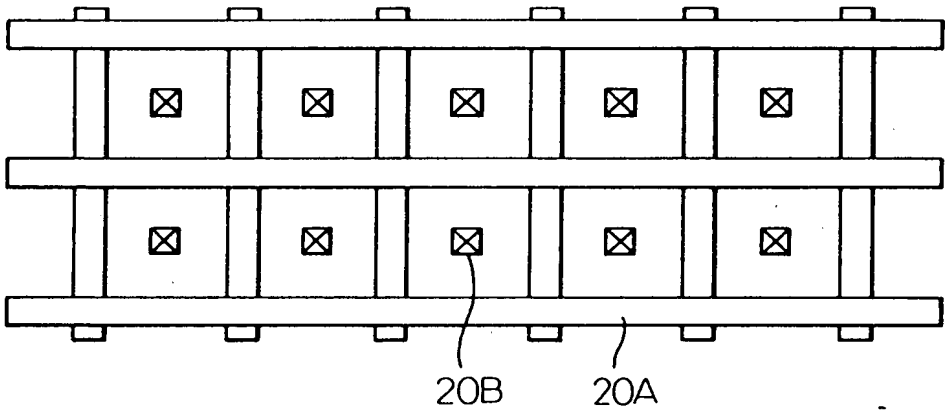


Fig.92A

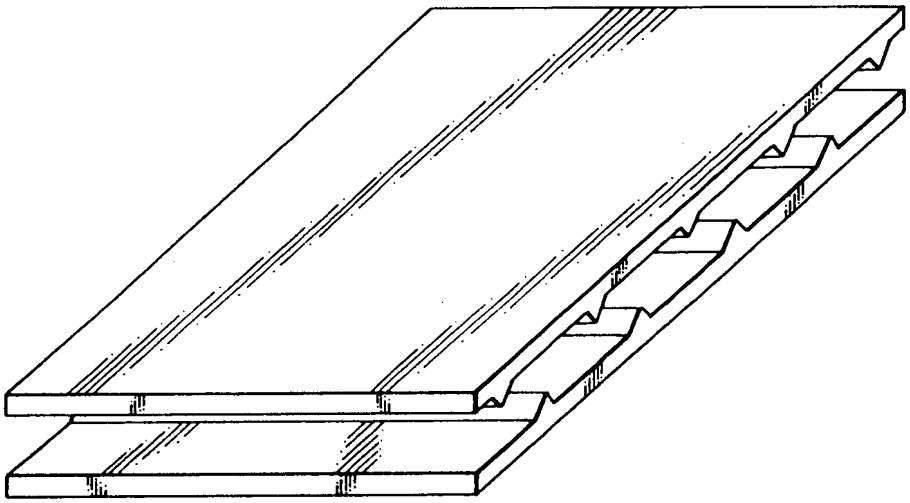


Fig.92B

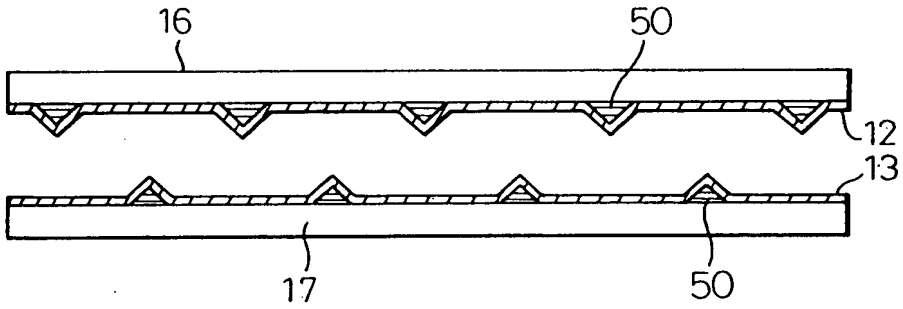


Fig.93

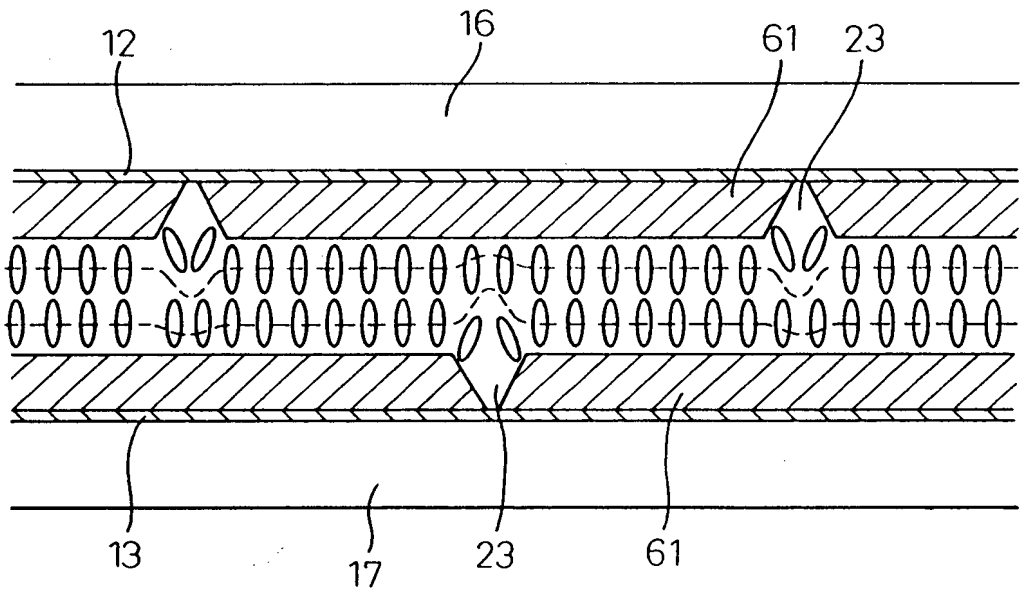


Fig.94

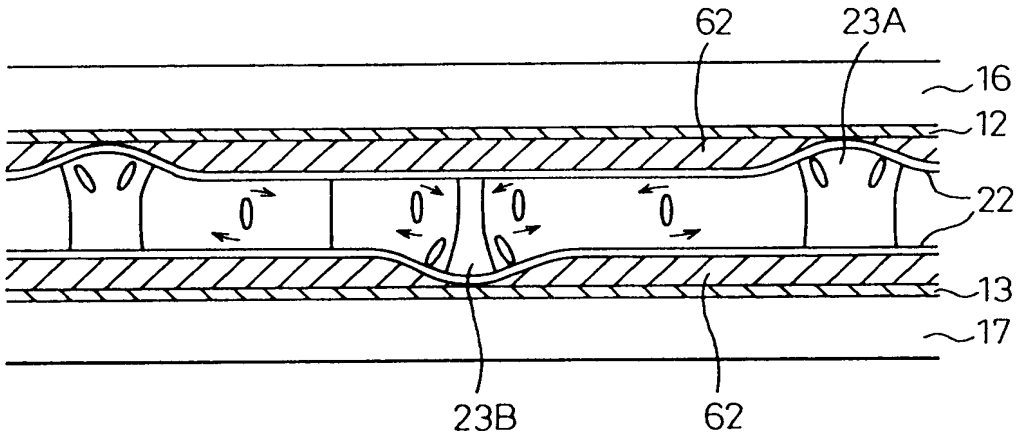


Fig.95

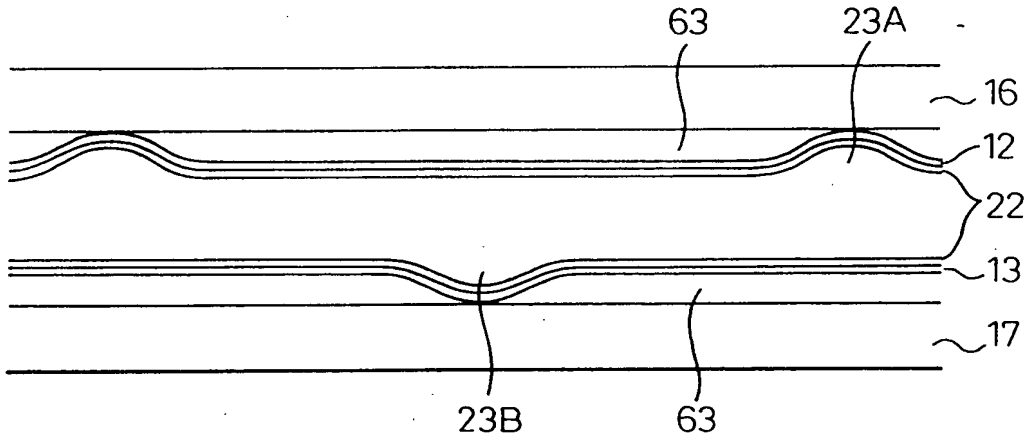


Fig.96

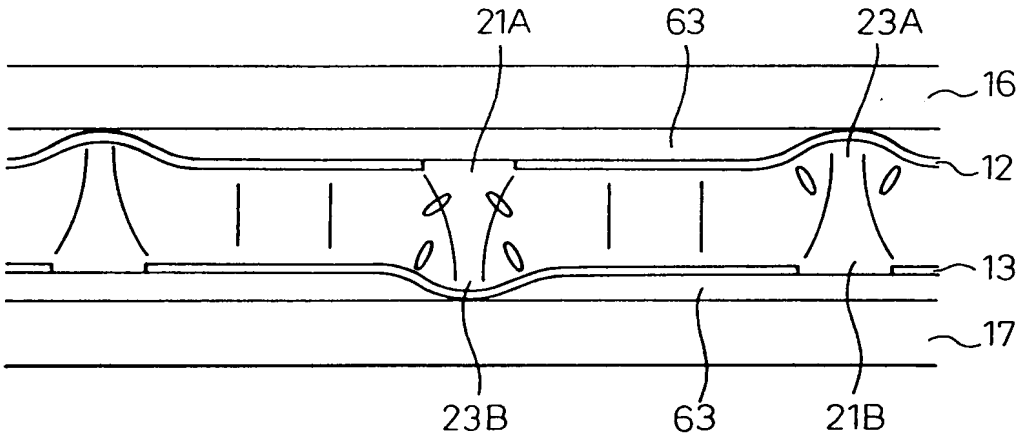


Fig.97

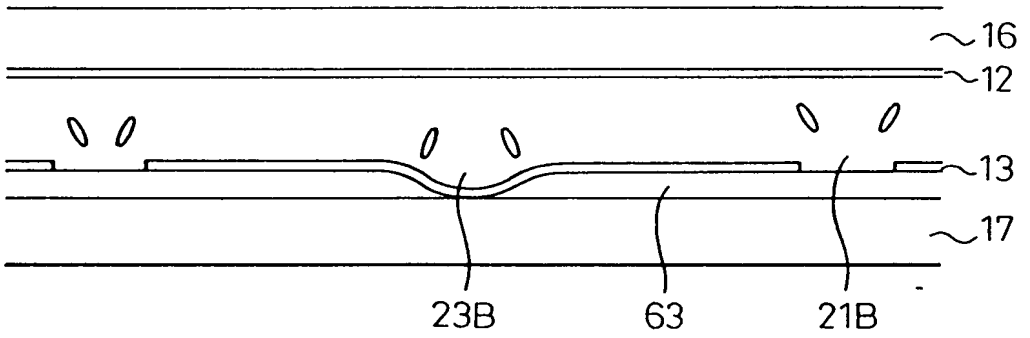


Fig.98

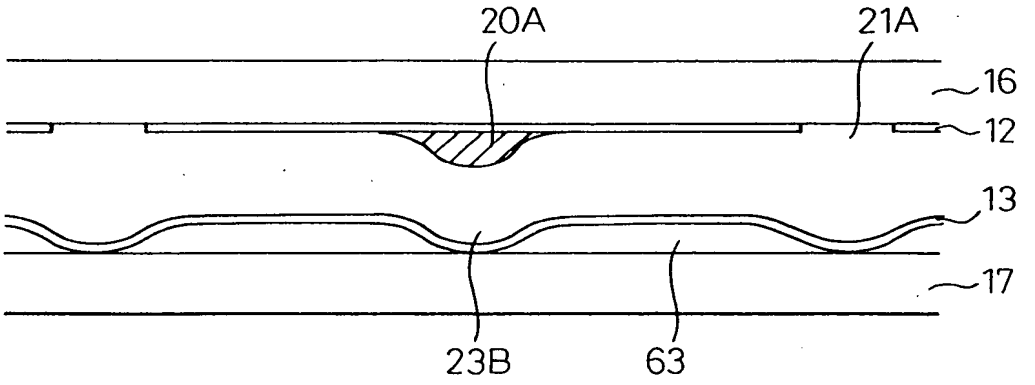


Fig.99A

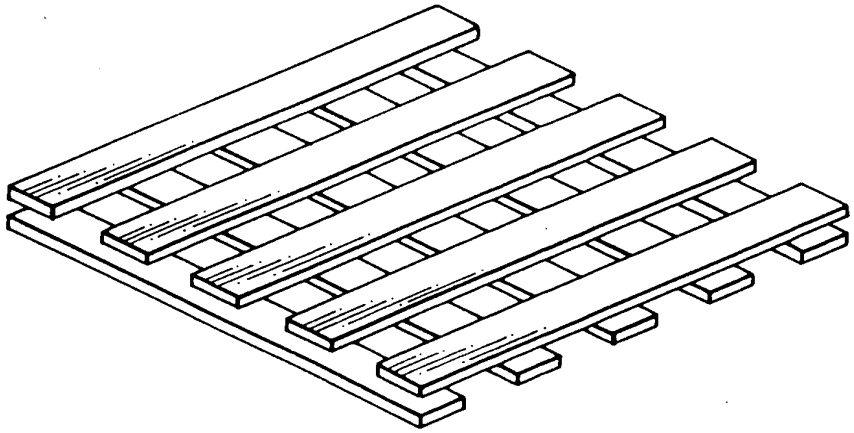


Fig.99B

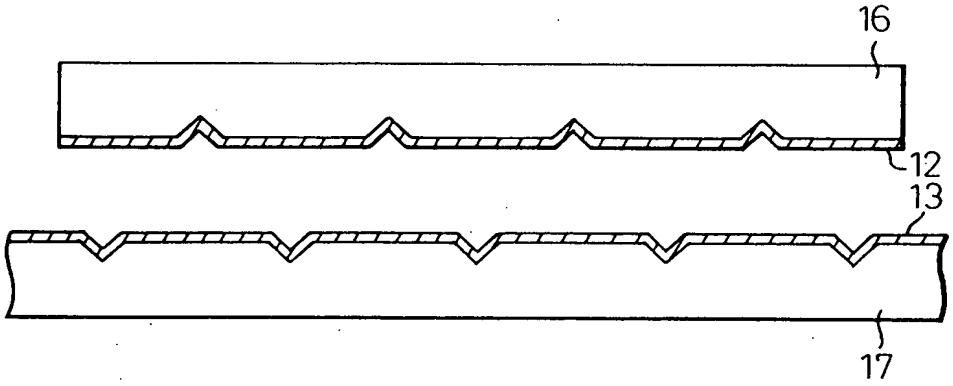


Fig.100A

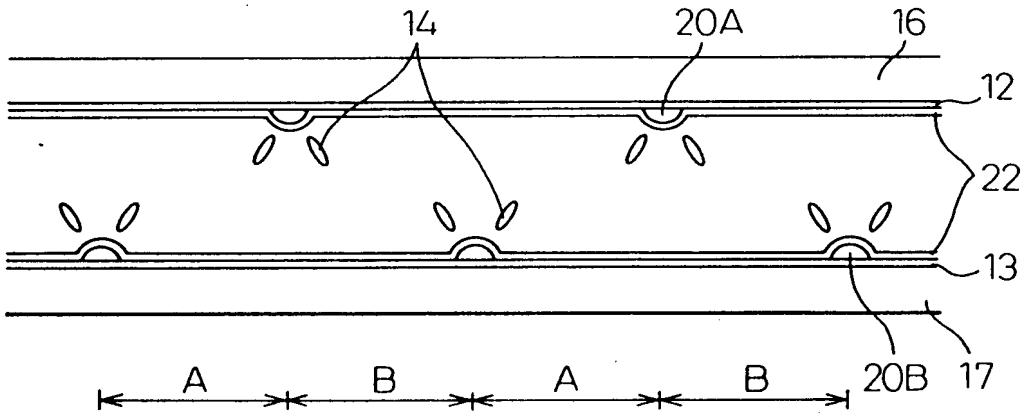


Fig.100B

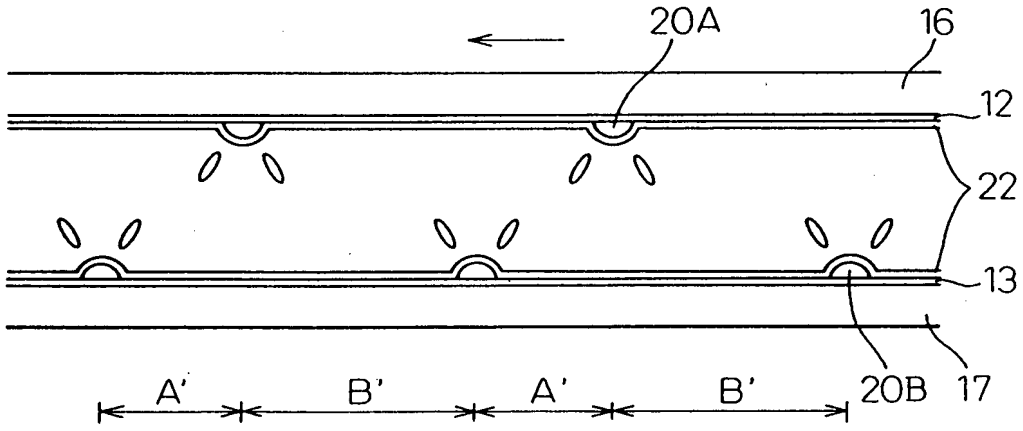


Fig.101A

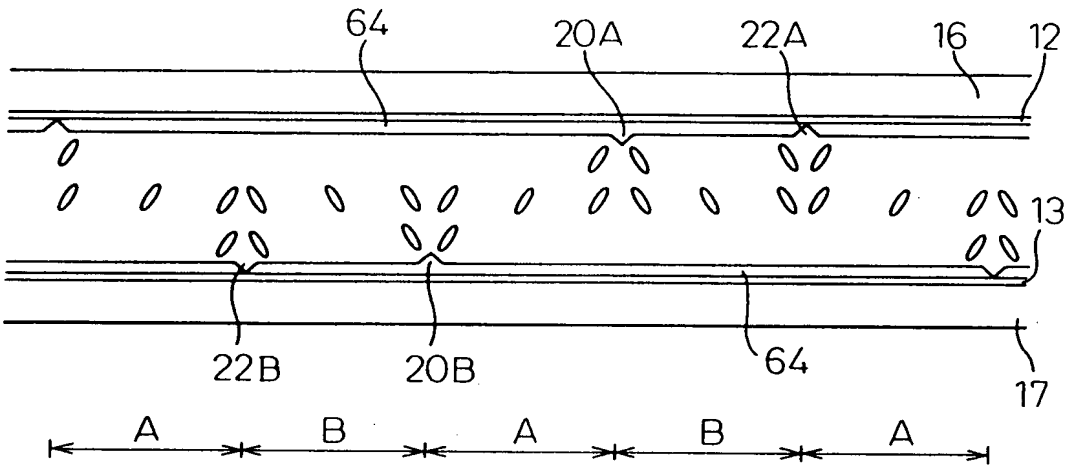
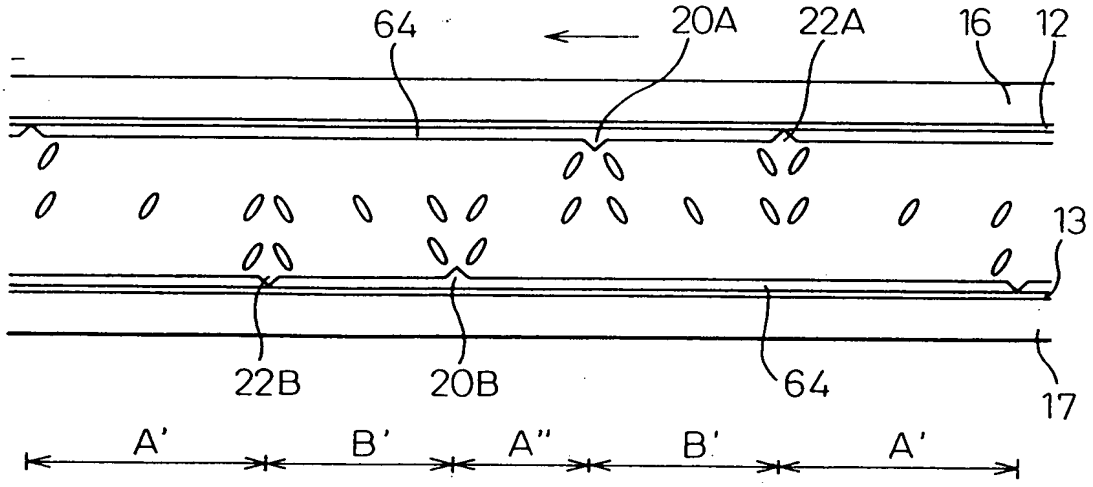


Fig.101B



A'+A"=2A

Fig.102

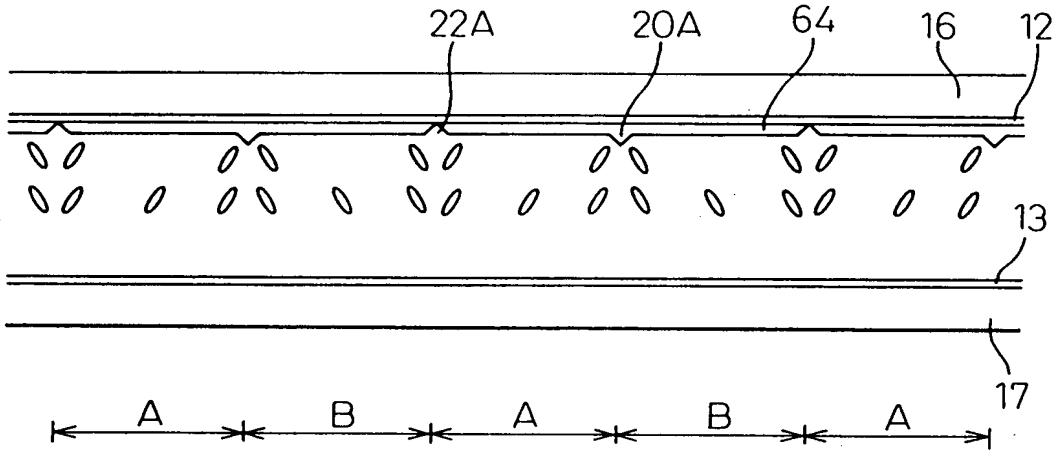


Fig. 103A

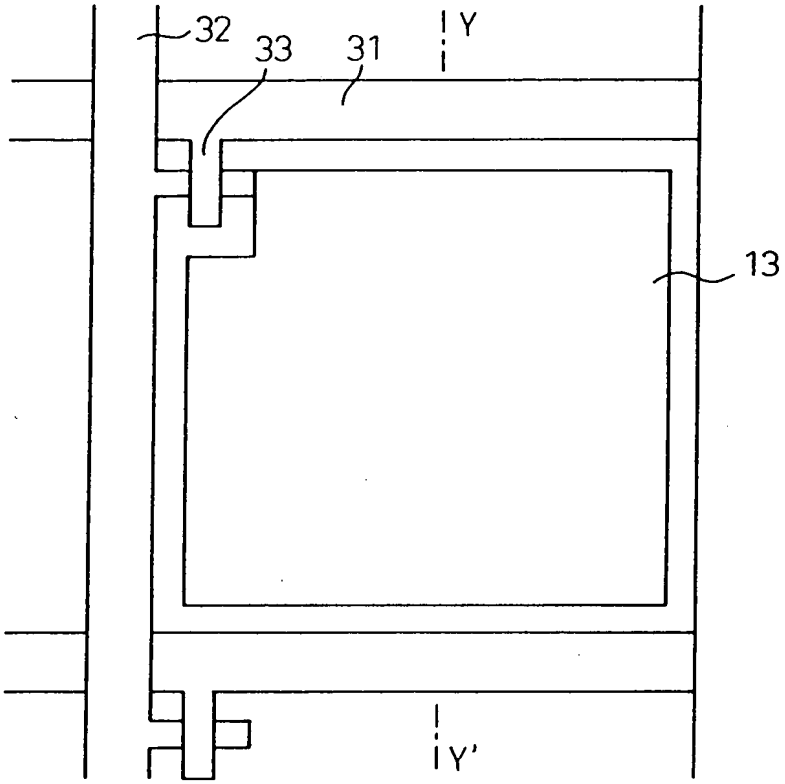


Fig. 103B

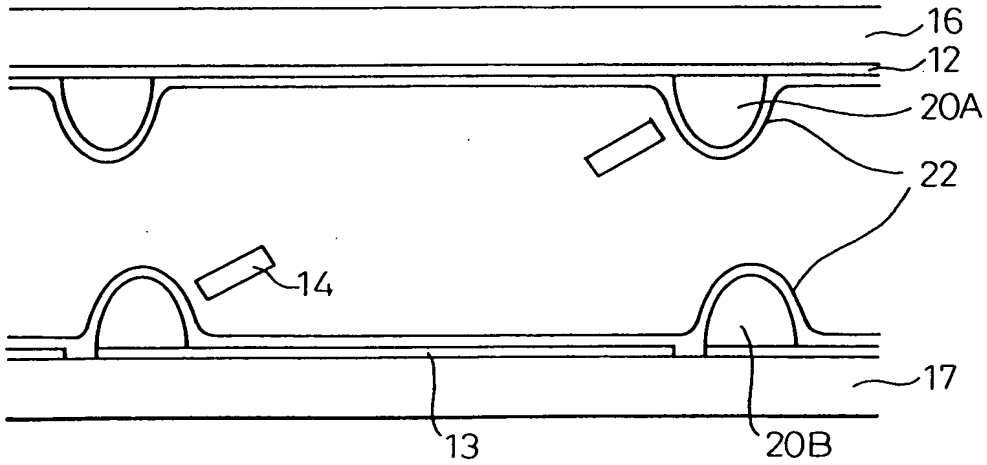


Fig.104

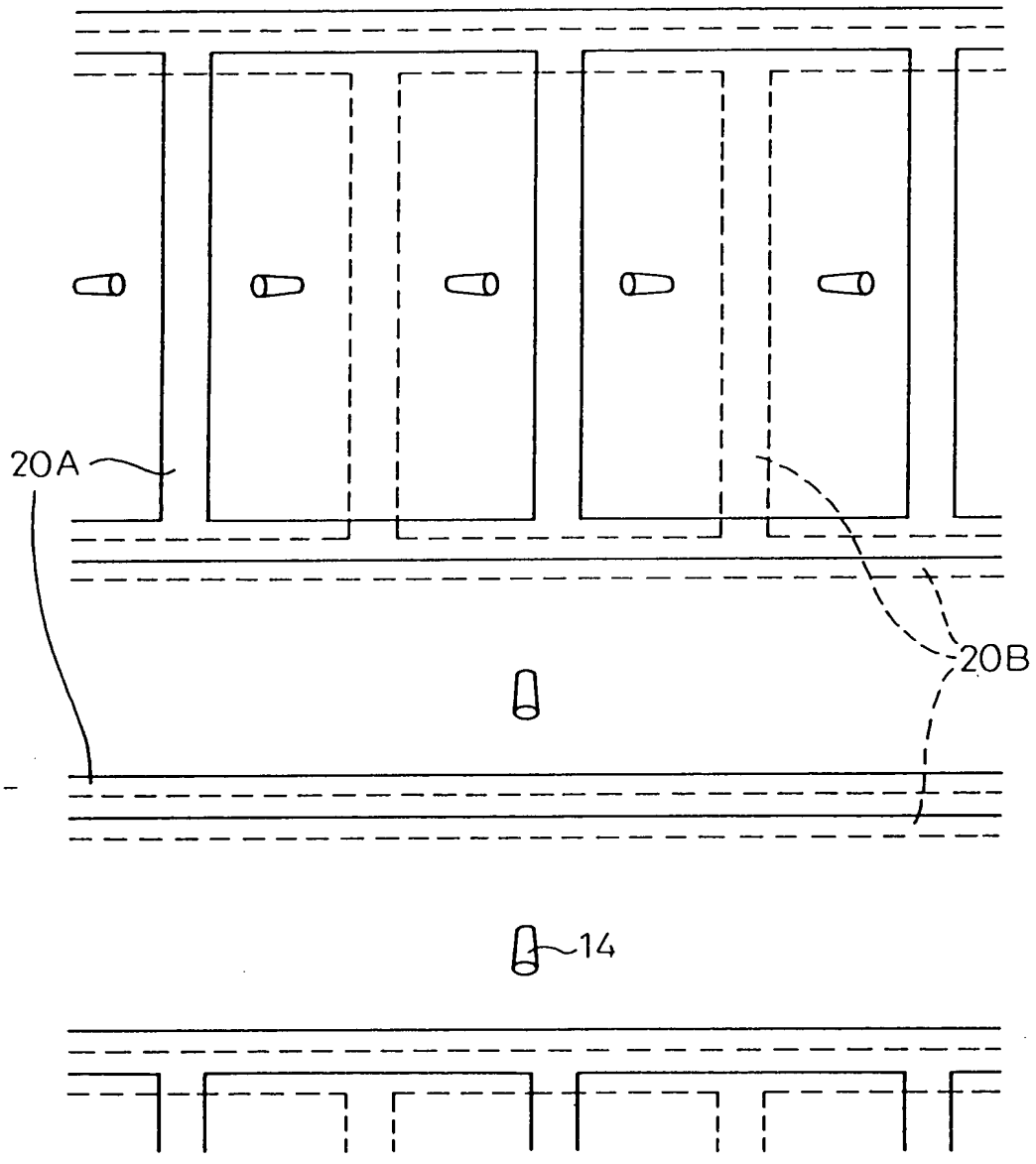


Fig.105A

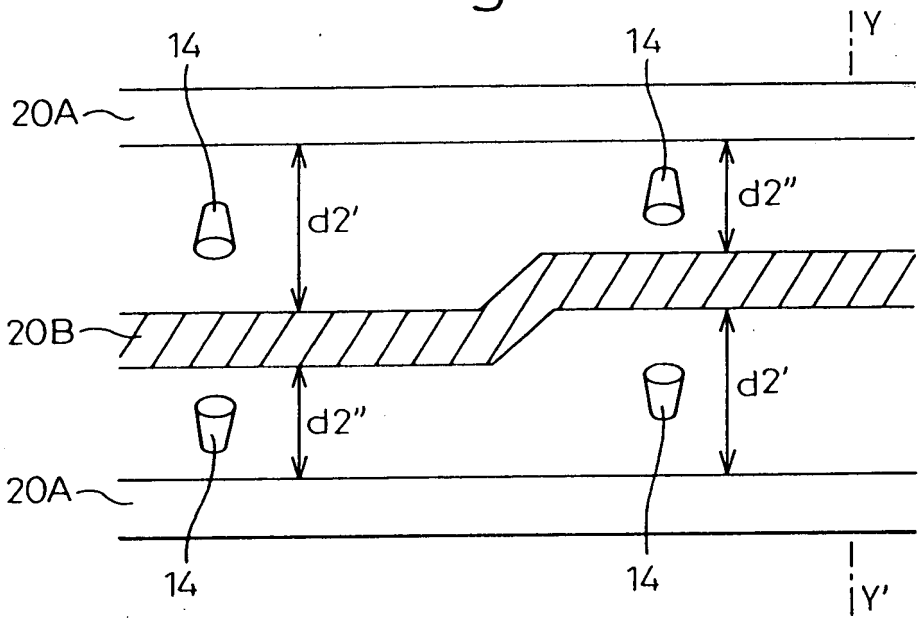


Fig.105B

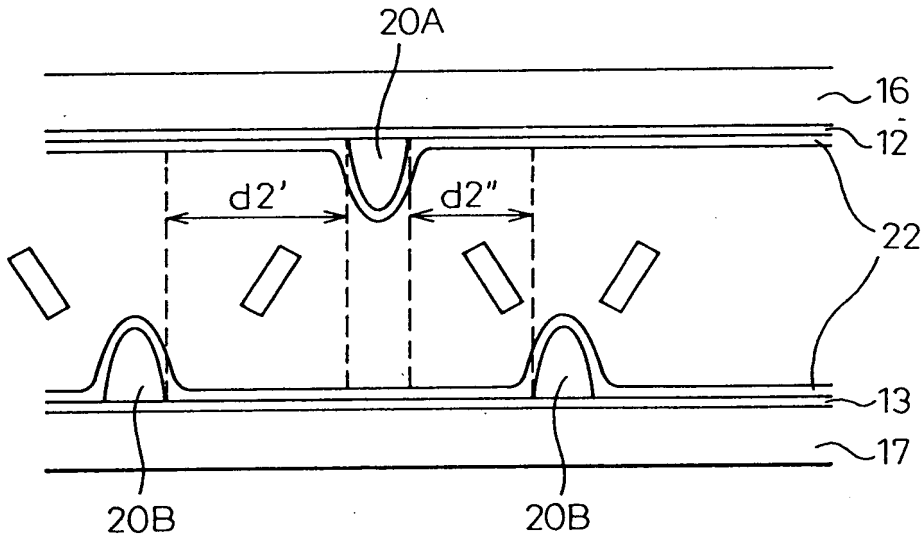


Fig.106

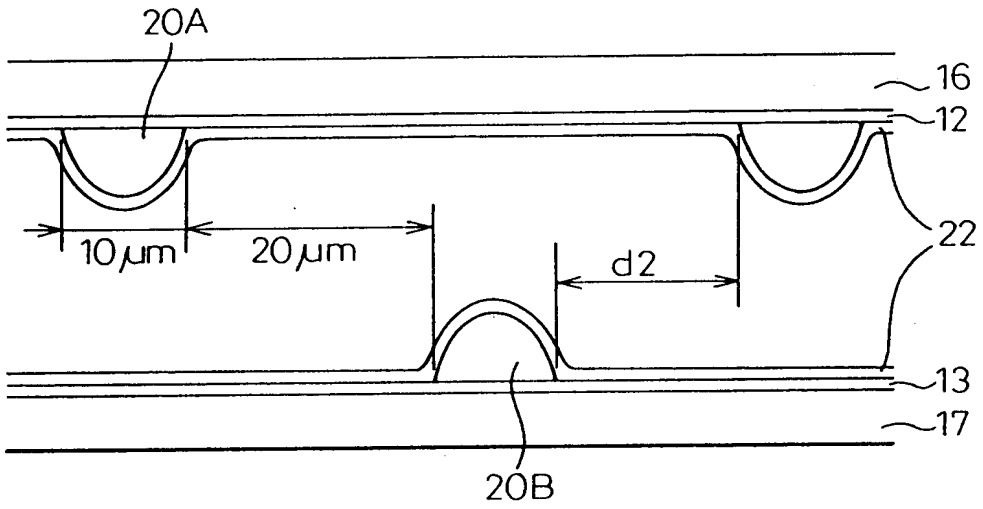


Fig.107

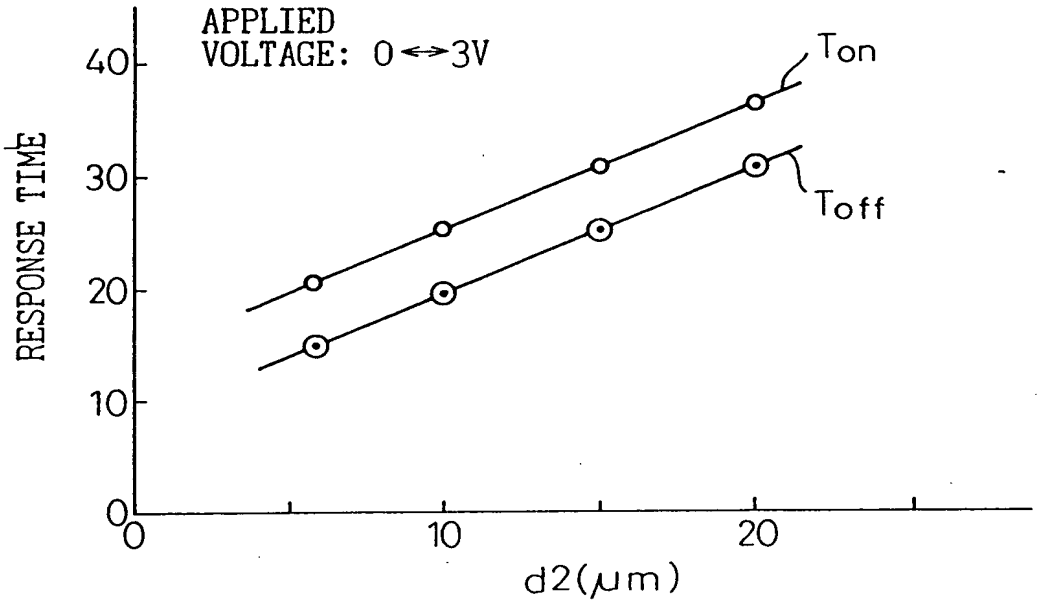


Fig.108A

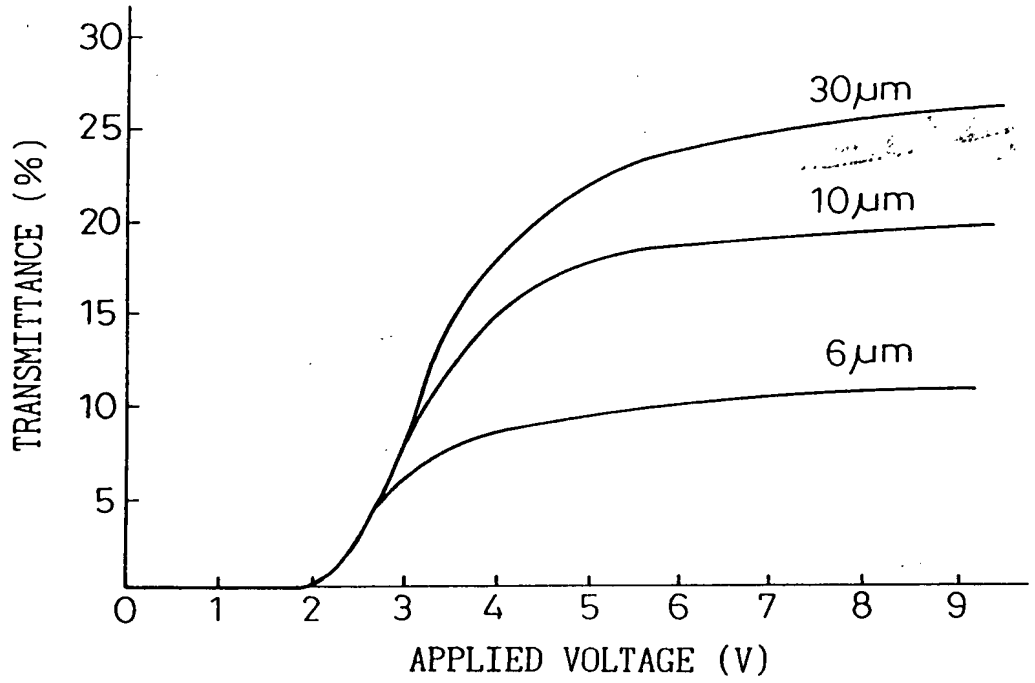


Fig.108B

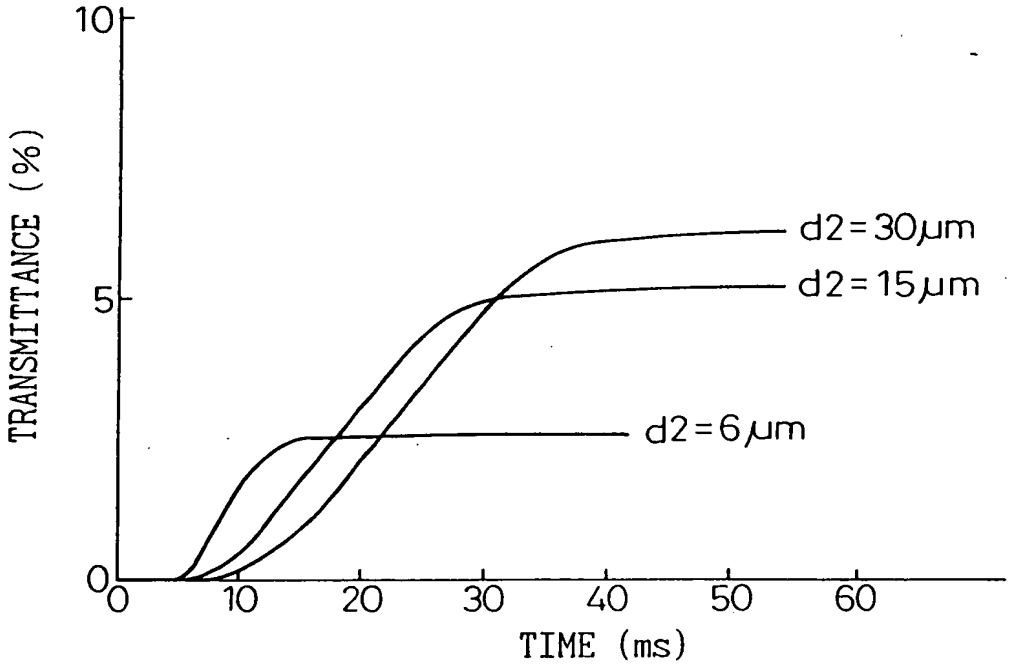


Fig.109A

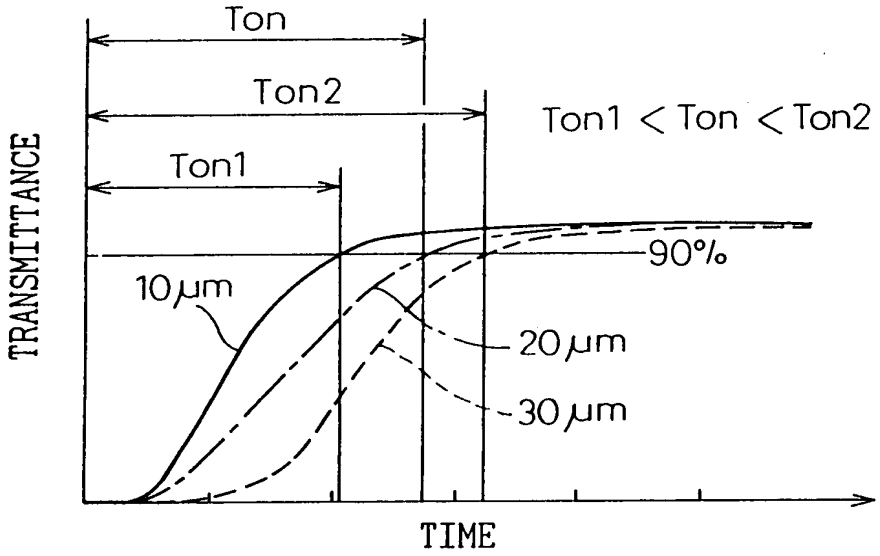


Fig.109B

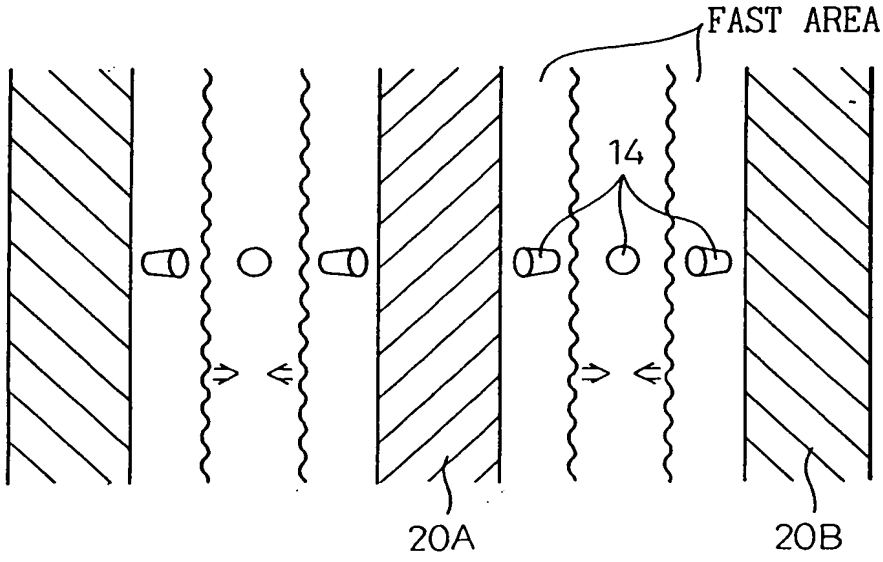


Fig.110

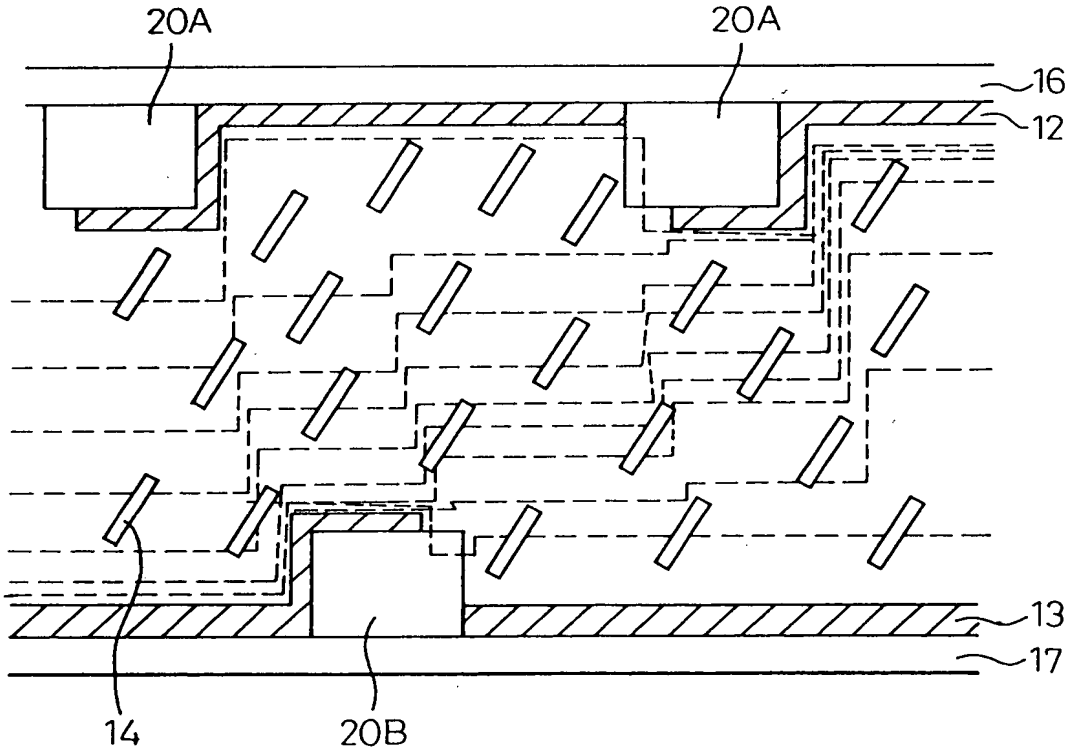


Fig. 111

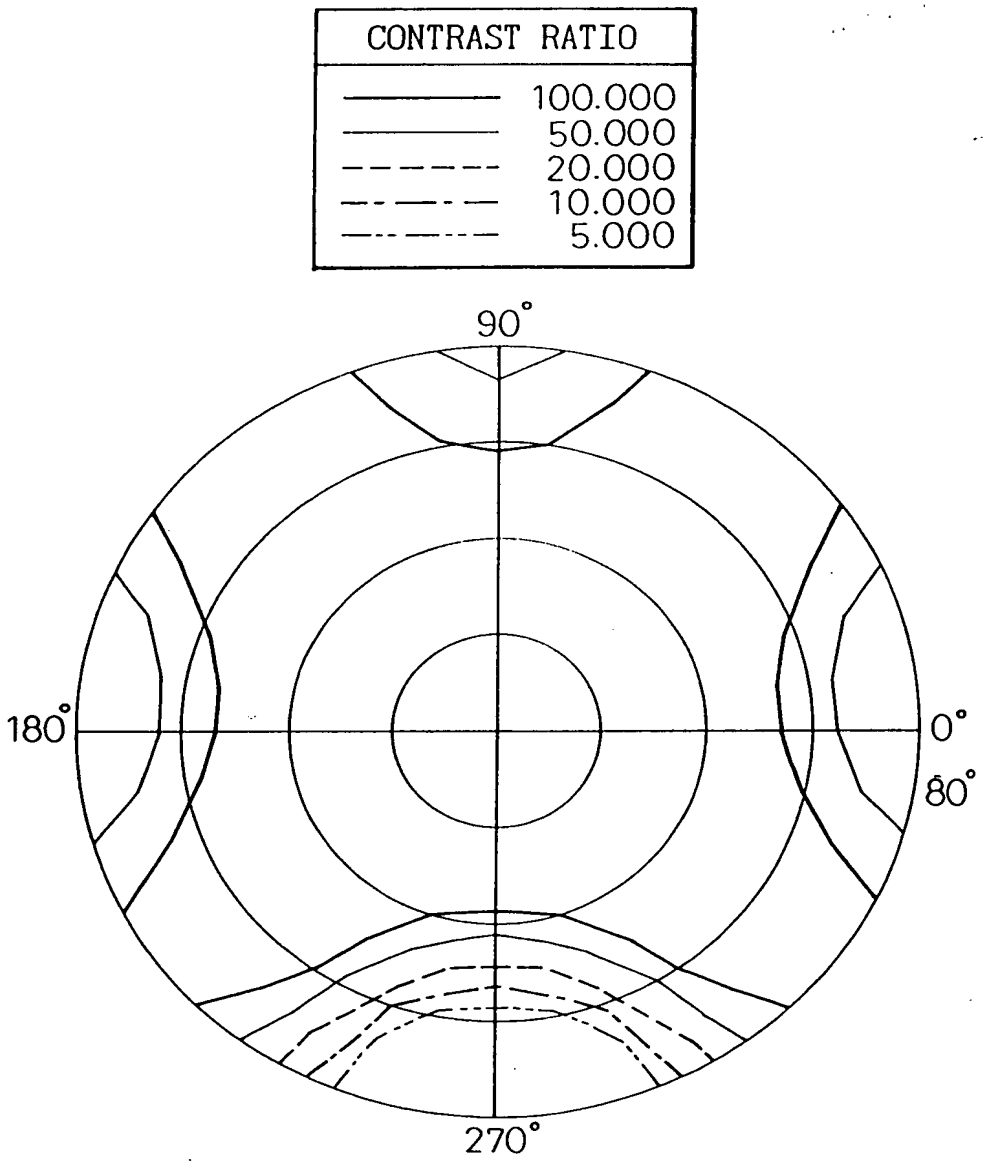


Fig.112

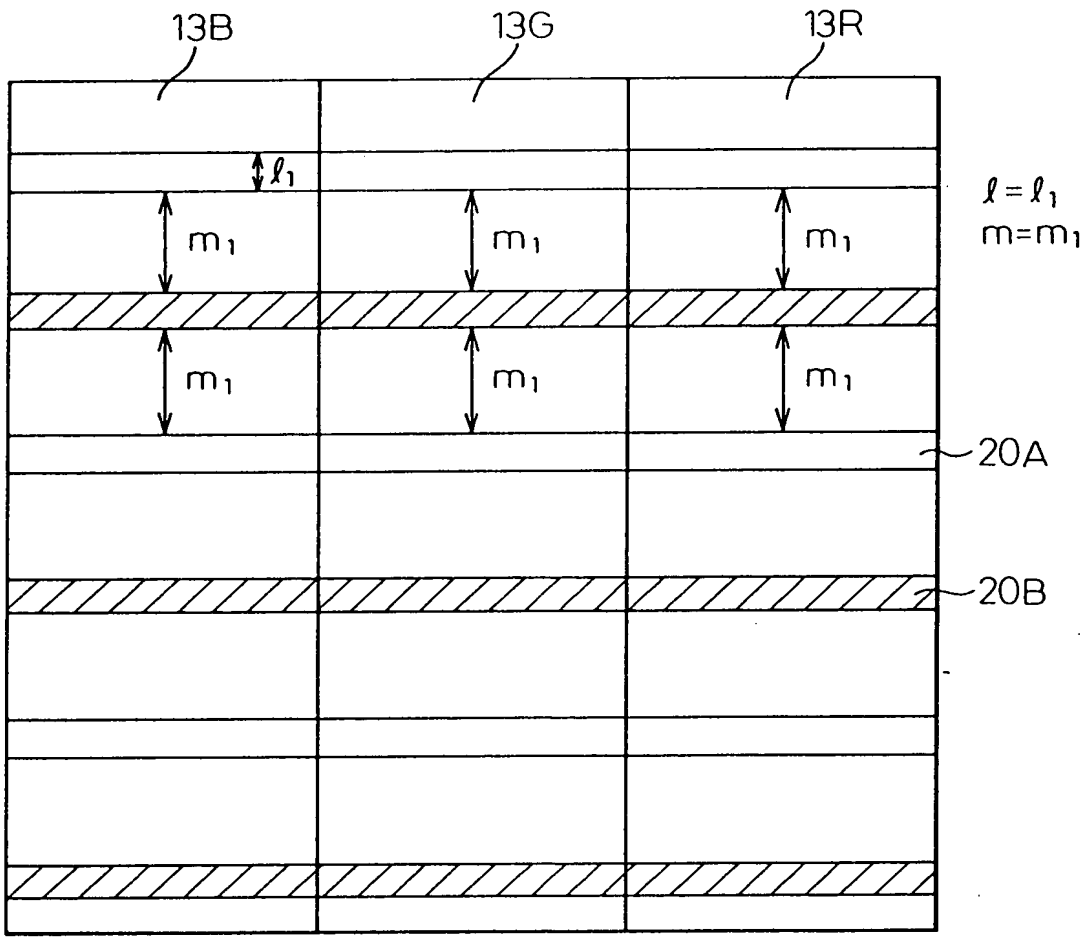


Fig.113

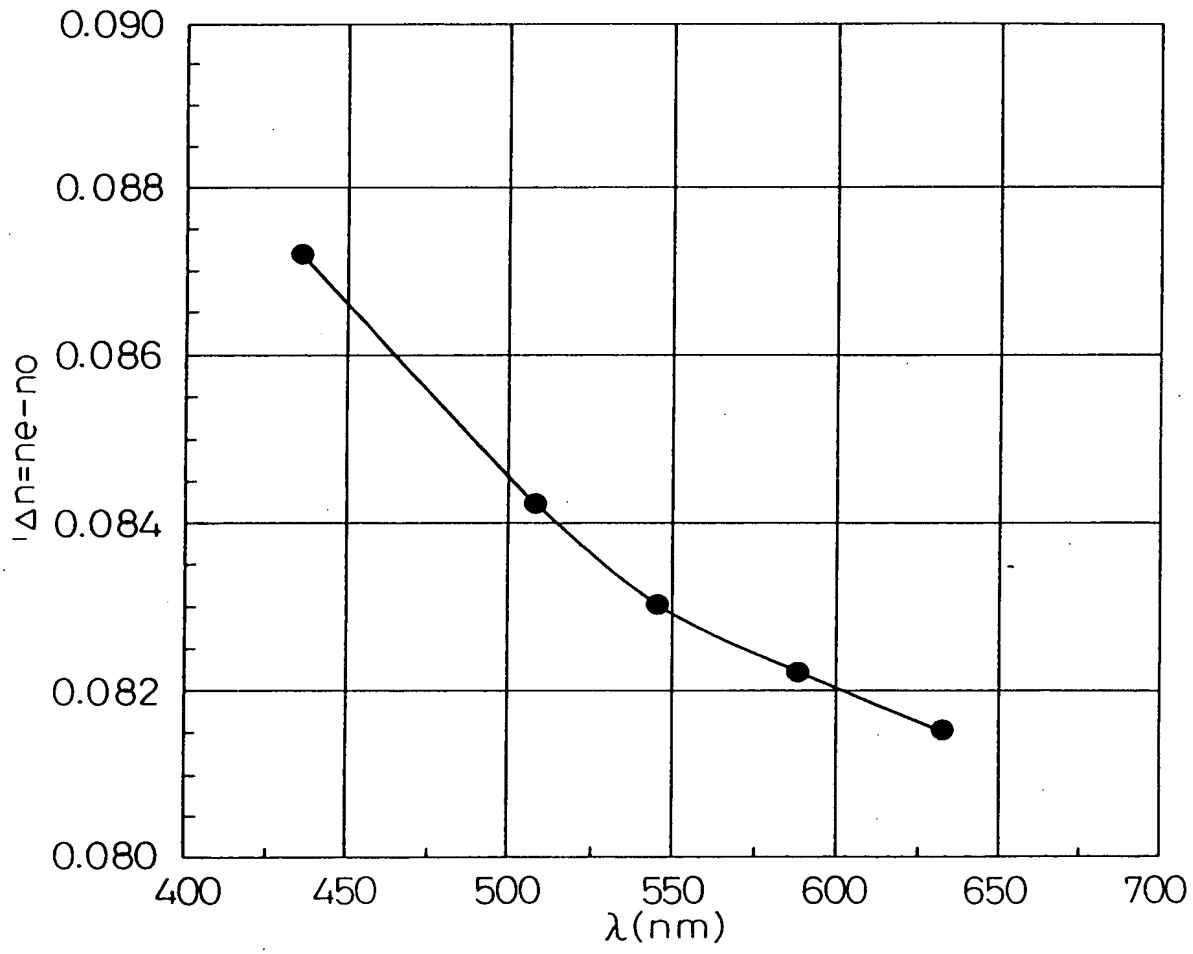

0.090
0.088
0.086
0.084
0.082
0.080
Δn=ne-no
400
450
500
550
600
650
700
λ(nm)

Fig.114

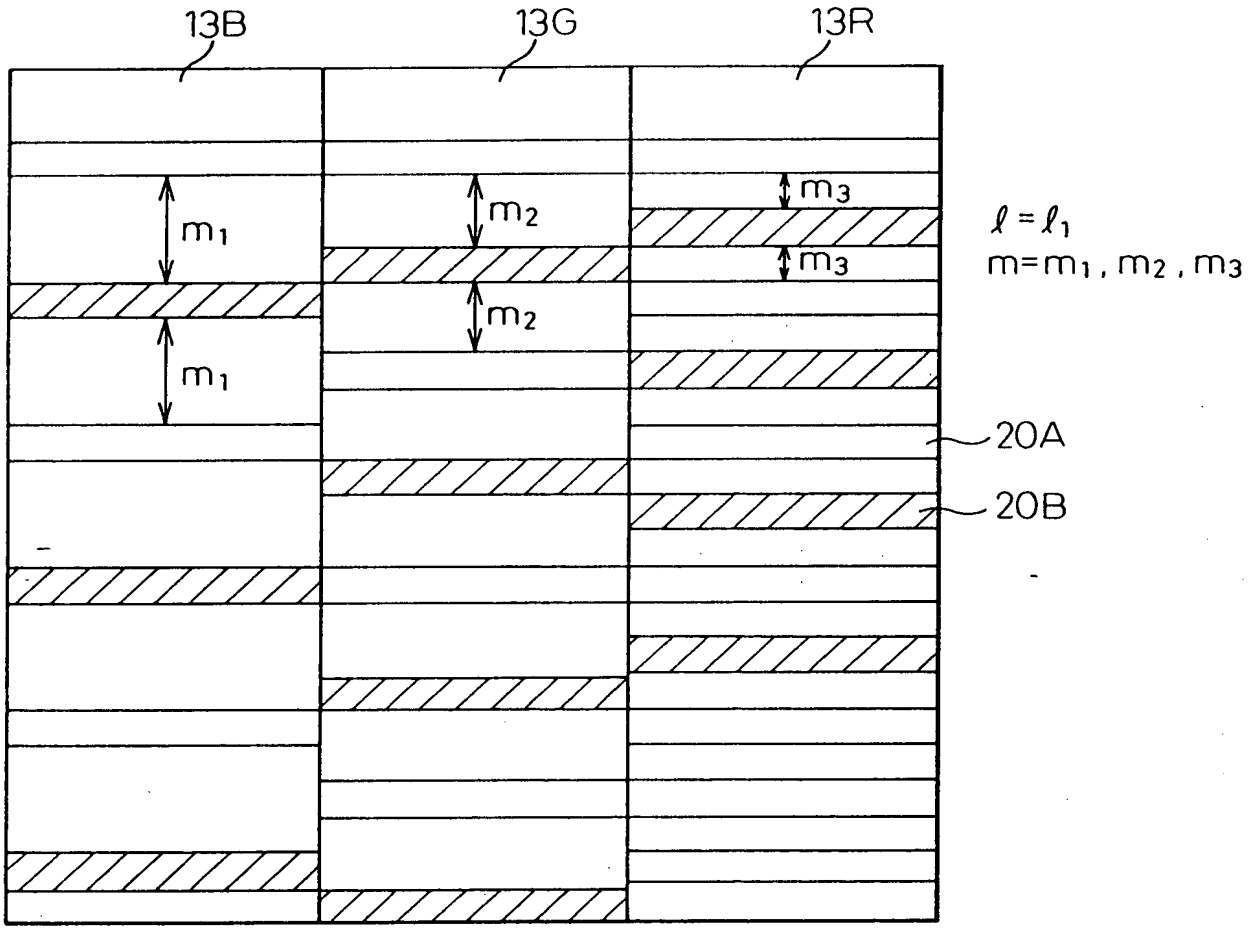


Fig.115

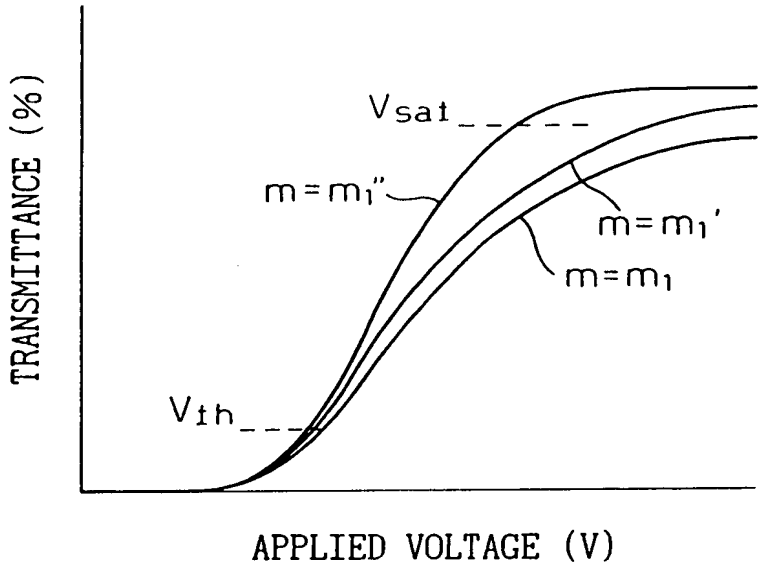


Fig.116

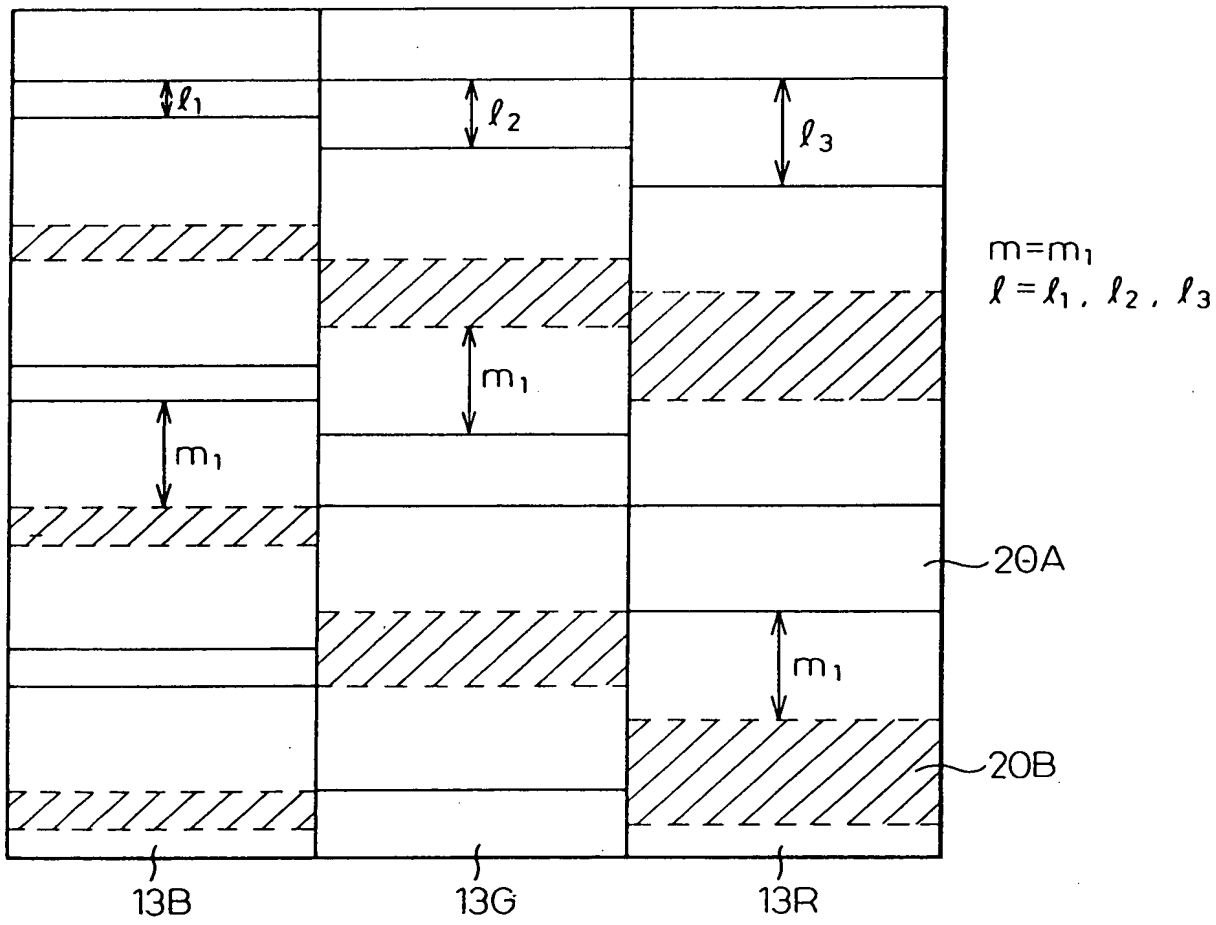

ℓ_1
ℓ_2
ℓ_3
m_1
m_1
m_1
$m=m_1$
$\ell=\ell_1, \ell_2, \ell_3$
20A
20B
13B
13G
13R

Fig.117

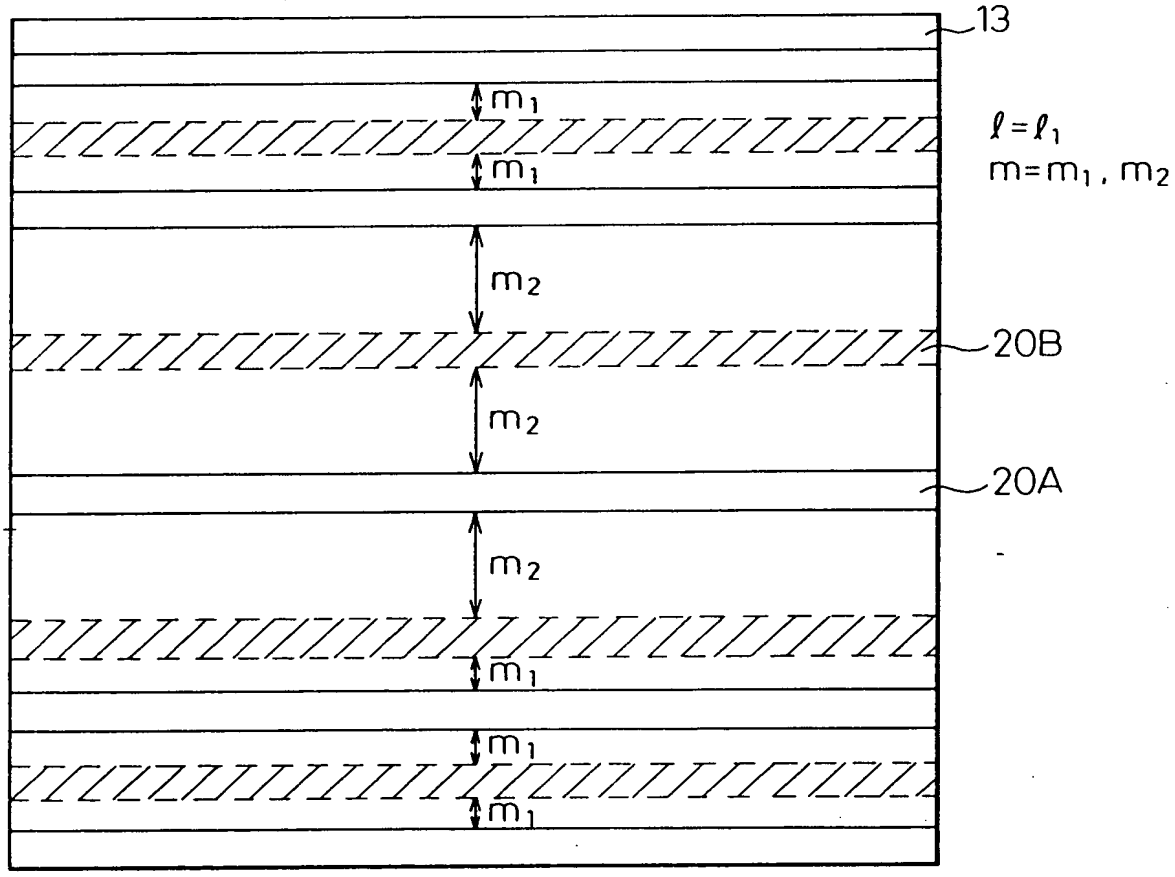


Fig.118

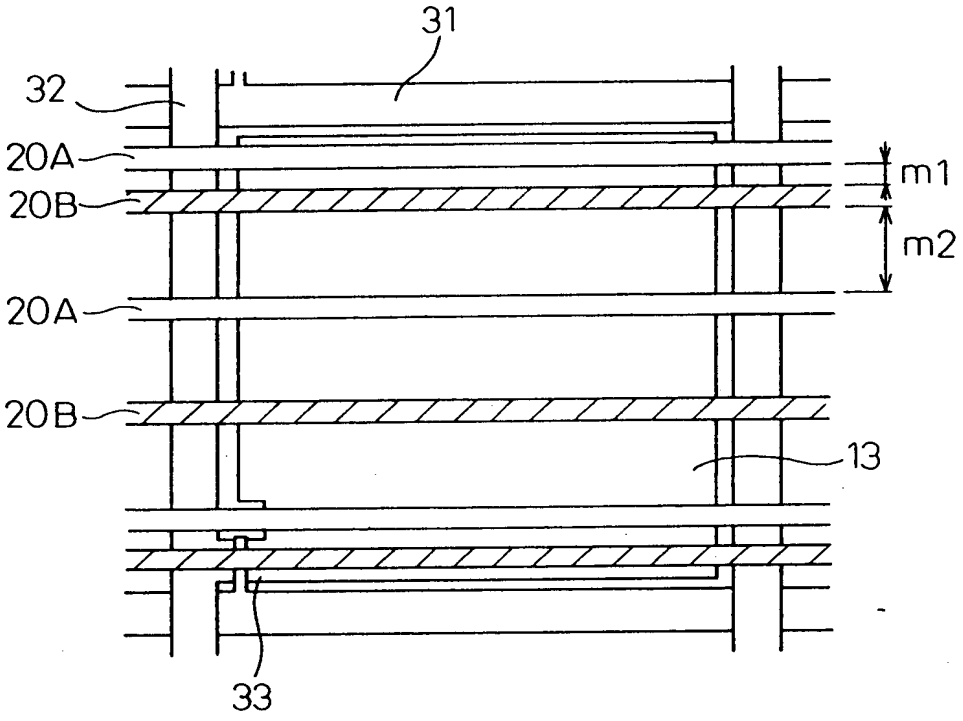


Fig.119

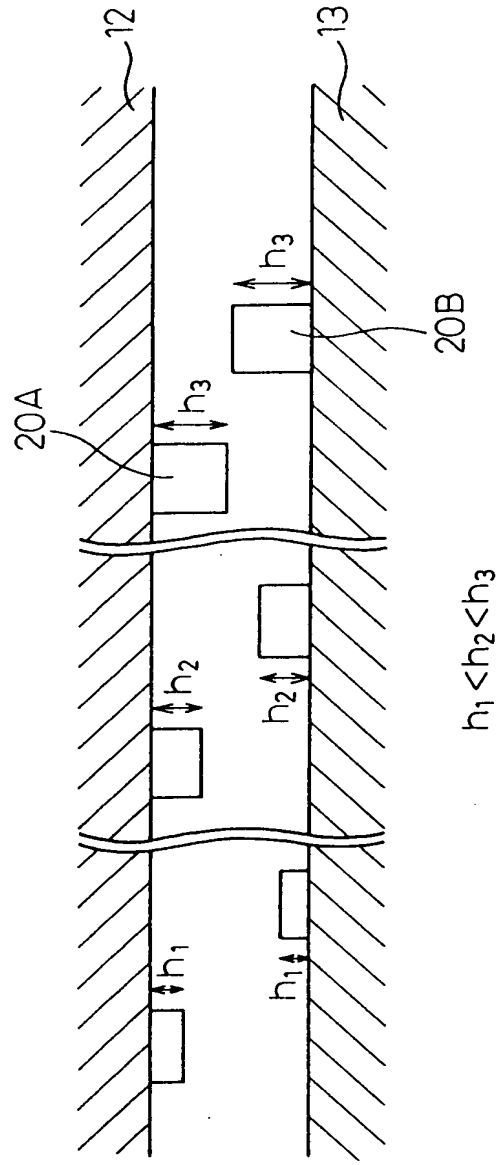


Fig.120

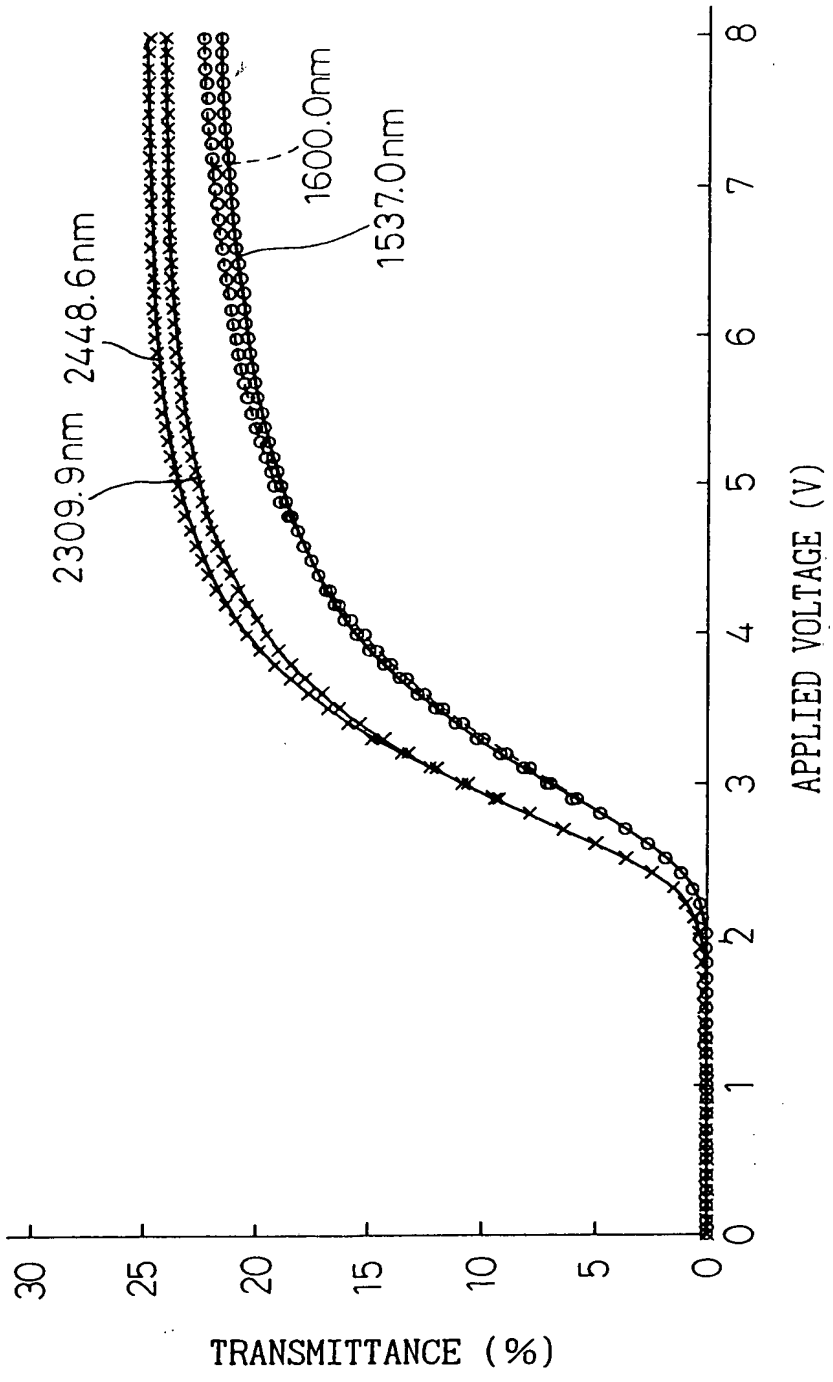

2309.9nm
2448.6nm
1600.0nm
1537.0nm
TRANSMITTANCE (%)
APPLIED VOLTAGE (V)
0
5
10
15
20
25
30
1
2
3
4
5
6
7
8

Fig.121

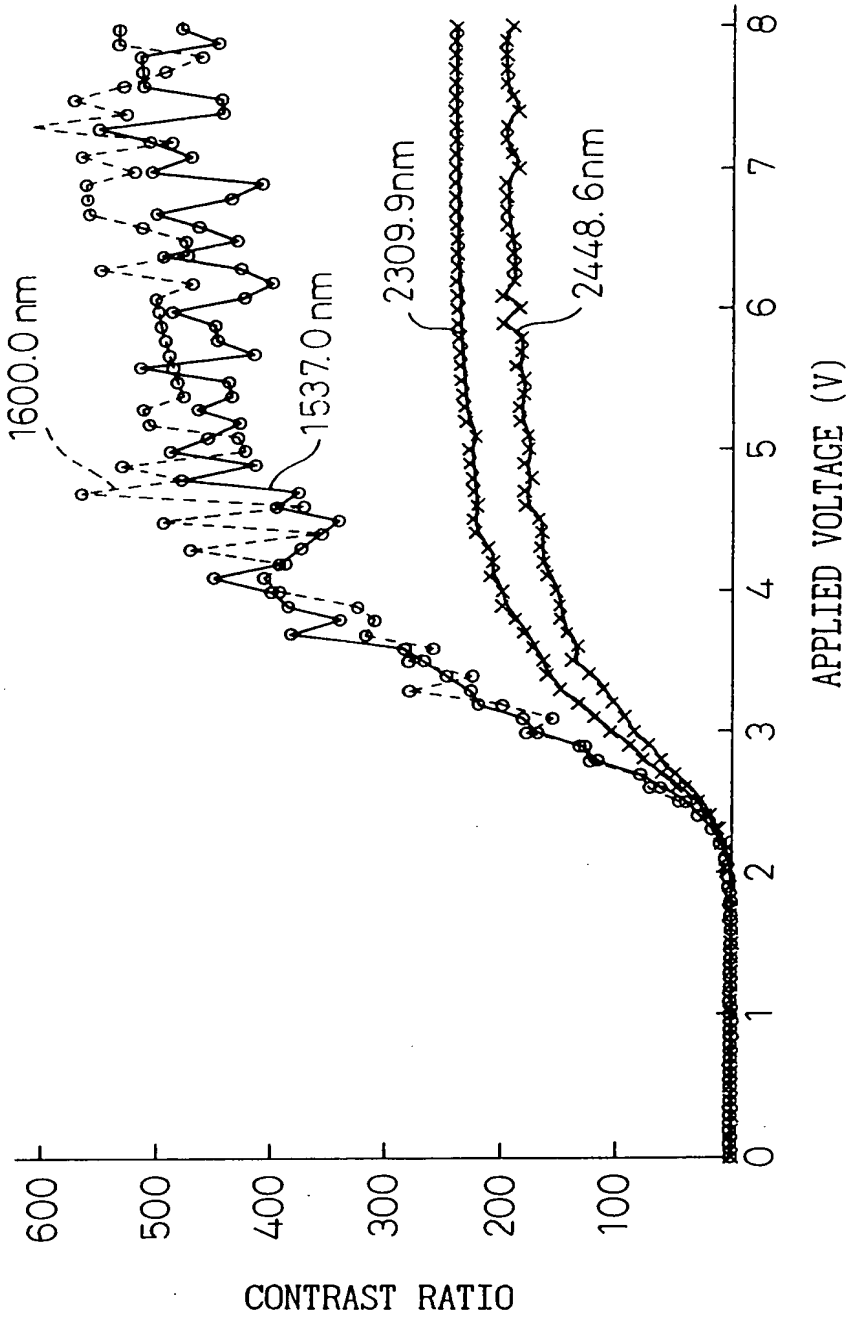

1600.0nm
1537.0nm
2309.9nm
2448.6nm
CONTRAST RATIO
APPLIED VOLTAGE (V)
600
500
400
300
200
100
0
1
2
3
4
5
6
7
8

Fig.122

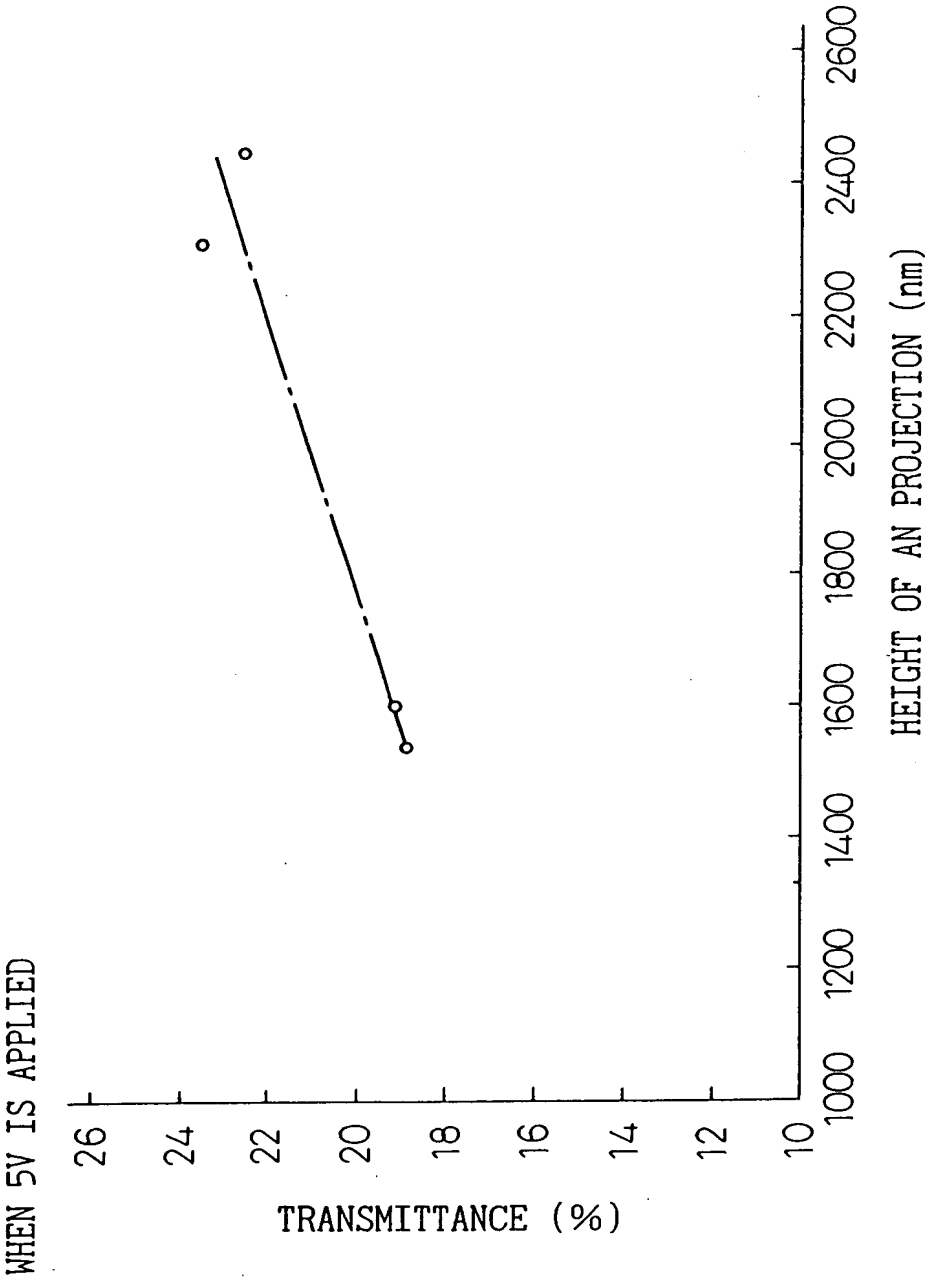

WHEN 5V IS APPLIED
TRANSMITTANCE (%)
26
24
22
20
18
16
14
12
10
1000
1200
1400
1600
1800
2000
2200
2400
2600
HEIGHT OF AN PROJECTION (nm)

Fig.123

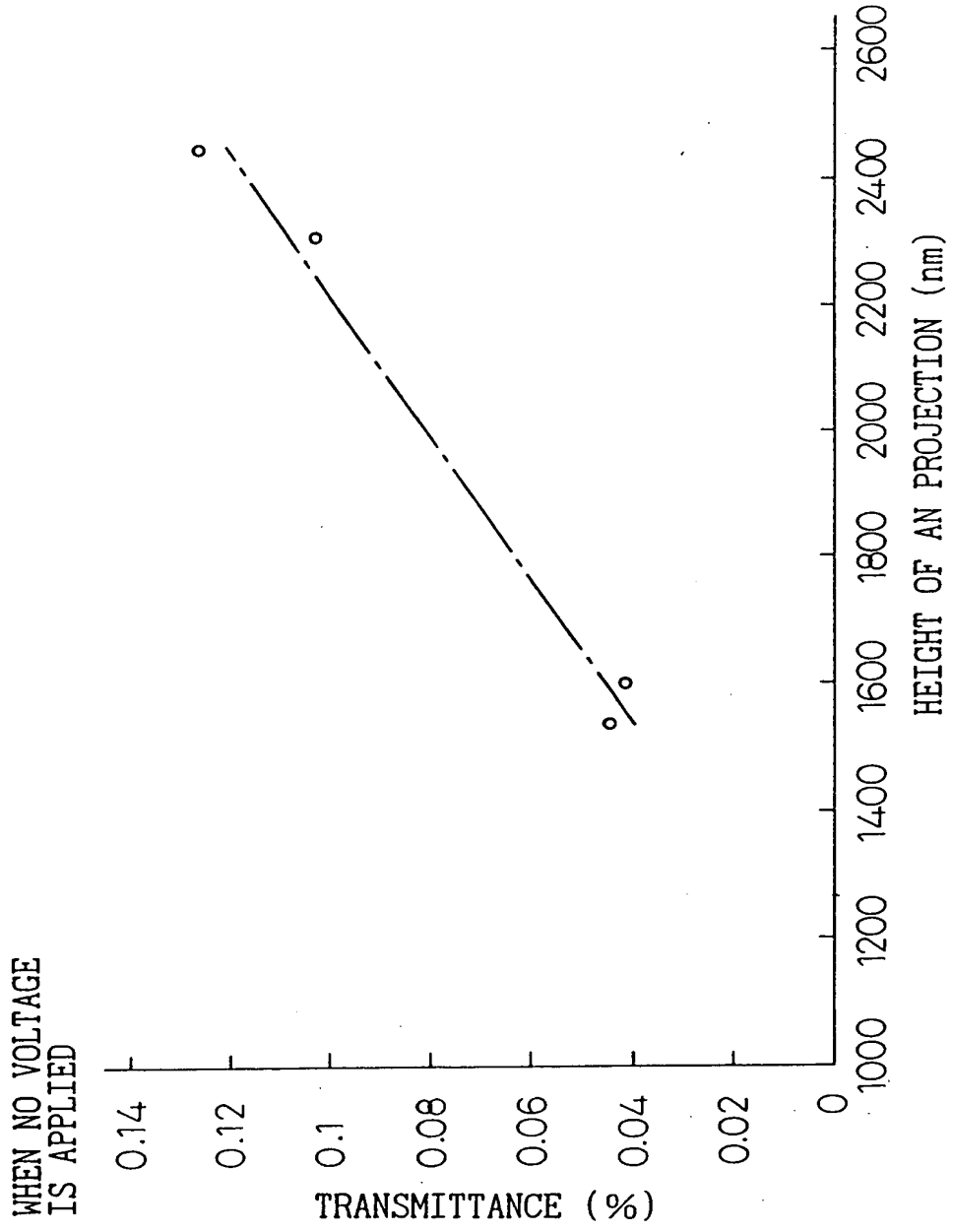

WHEN NO VOLTAGE IS APPLIED
TRANSMITTANCE (%)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1000
1200
1400
1600
1800
2000
2200
2400
2600
HEIGHT OF AN PROJECTION (nm)

Fig.124A

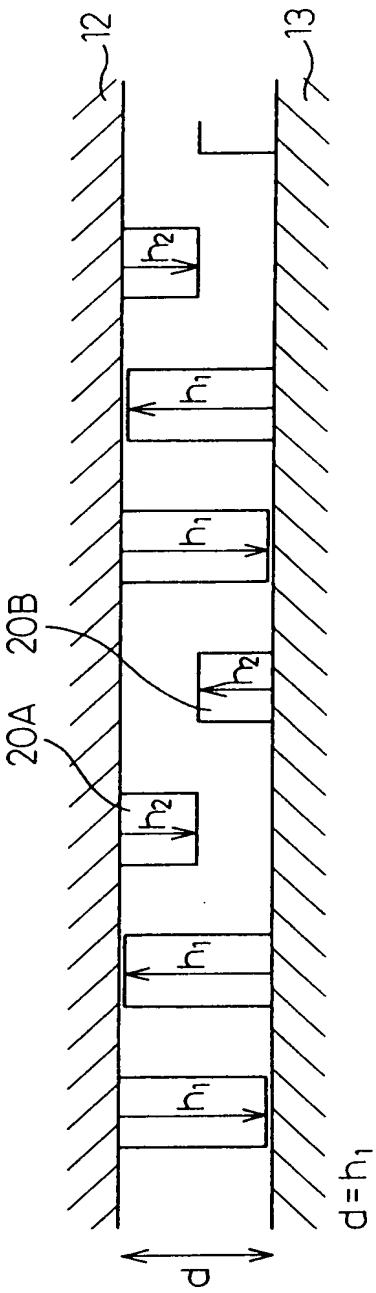


Fig.124B

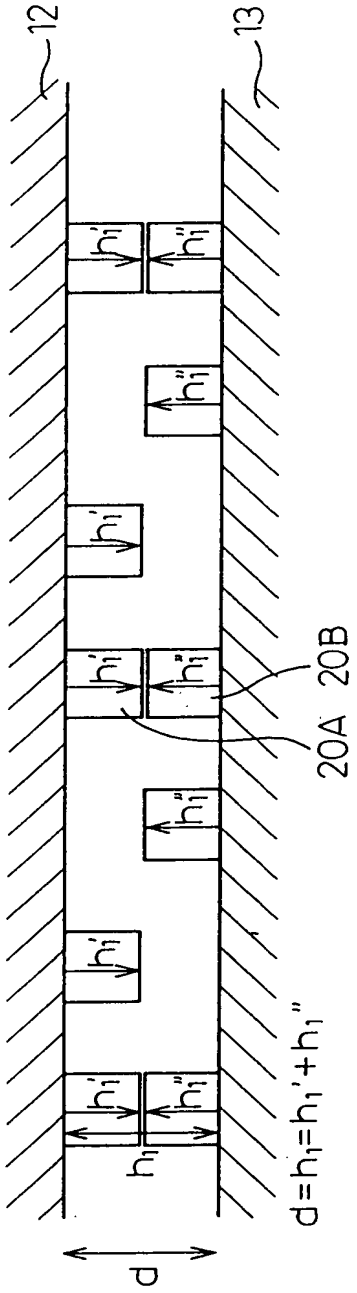


Fig.125A

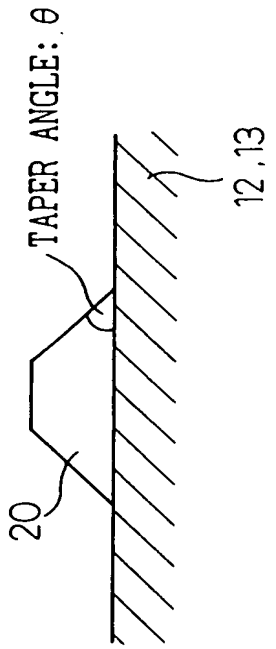


Fig.125B

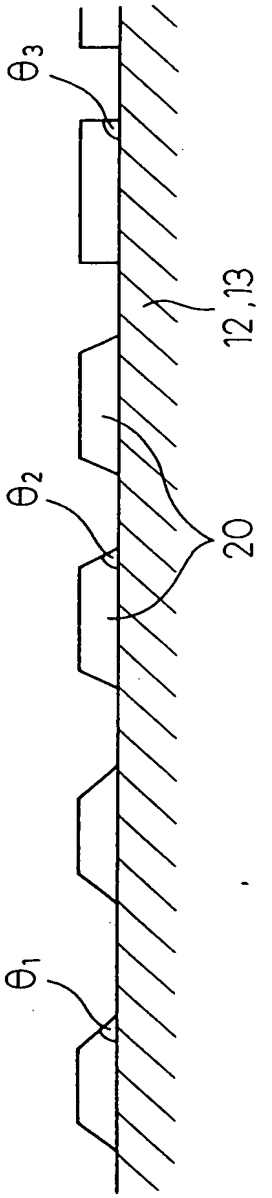


Fig. 126

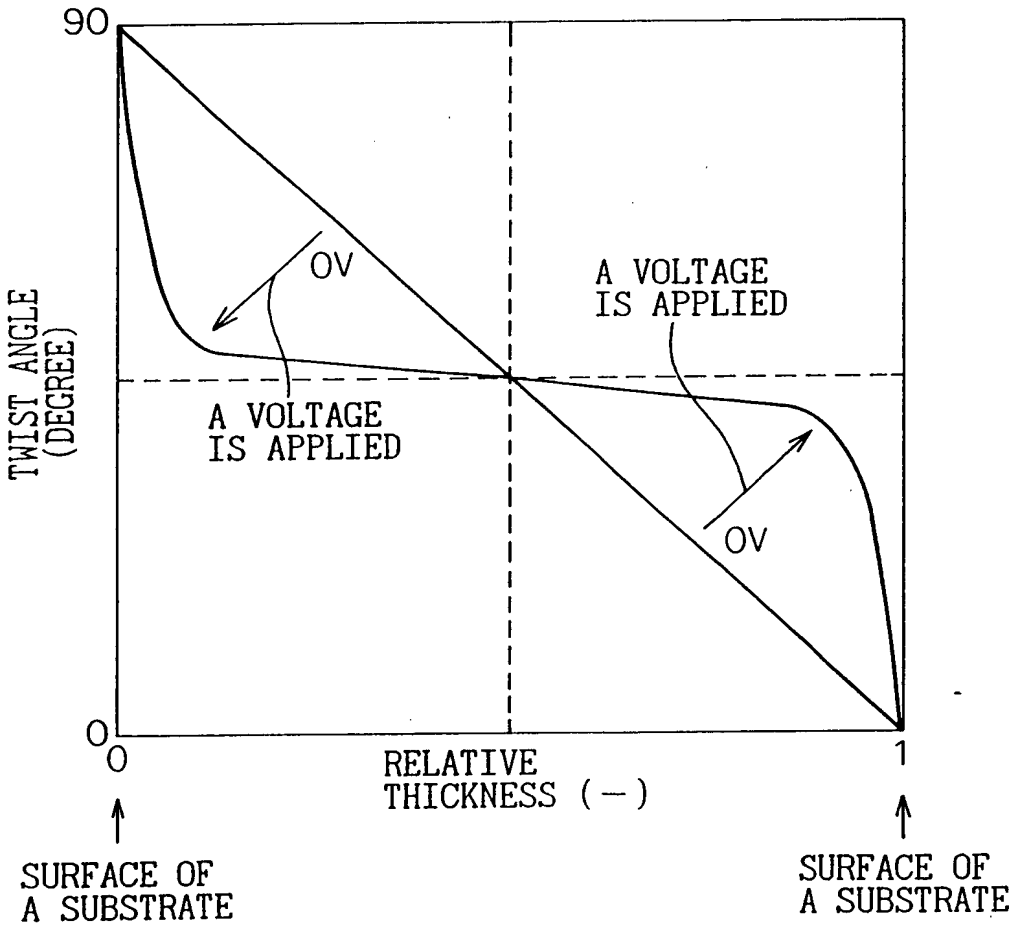

90
0
0
1
TWIST ANGLE (DEGREE)
RELATIVE THICKNESS (—)
OV
A VOLTAGE IS APPLIED
A VOLTAGE IS APPLIED
OV
SURFACE OF A SUBSTRATE
SURFACE OF A SUBSTRATE

Fig. 127

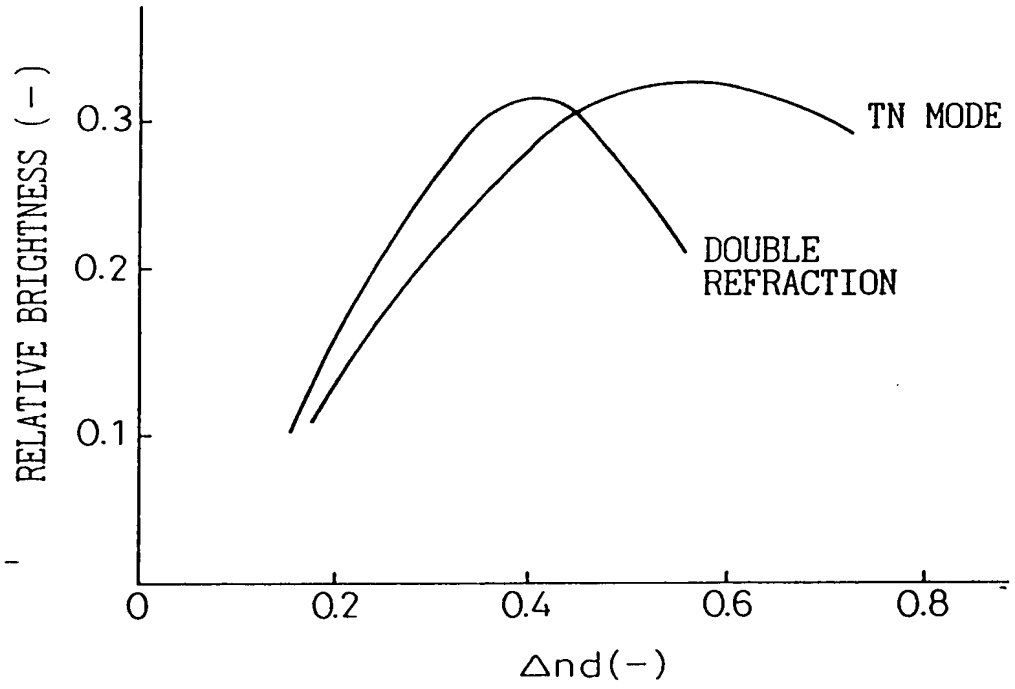

RELATIVE BRIGHTNESS (-)
0.3
0.2
0.1
0
0.2
0.4
0.6
0.8
Δnd(-)
TN MODE
DOUBLE
REFRACTION

Fig .128

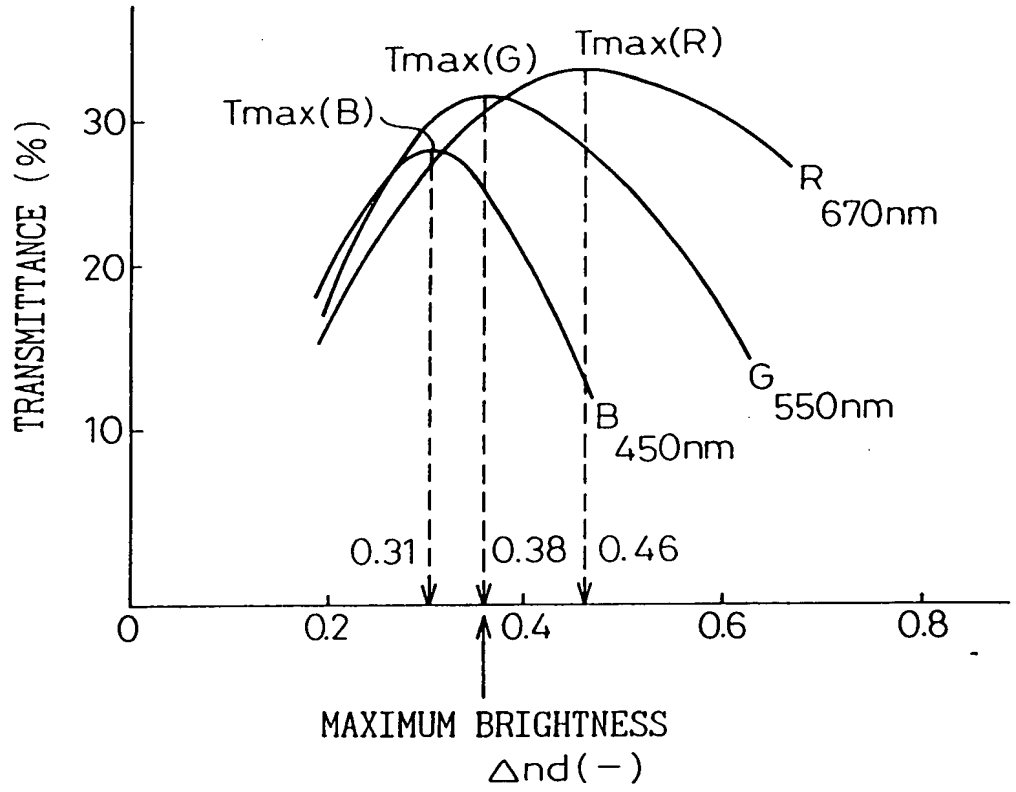

Tmax(G)
Tmax(R)
Tmax(B)
TRANSMITTANCE (%)
30
20
10
R
670nm
G
550nm
B
450nm
0.31
0.38
0.46
0
0.2
0.4
0.6
0.8
MAXIMUM BRIGHTNESS
Δnd(−)

Fig.129

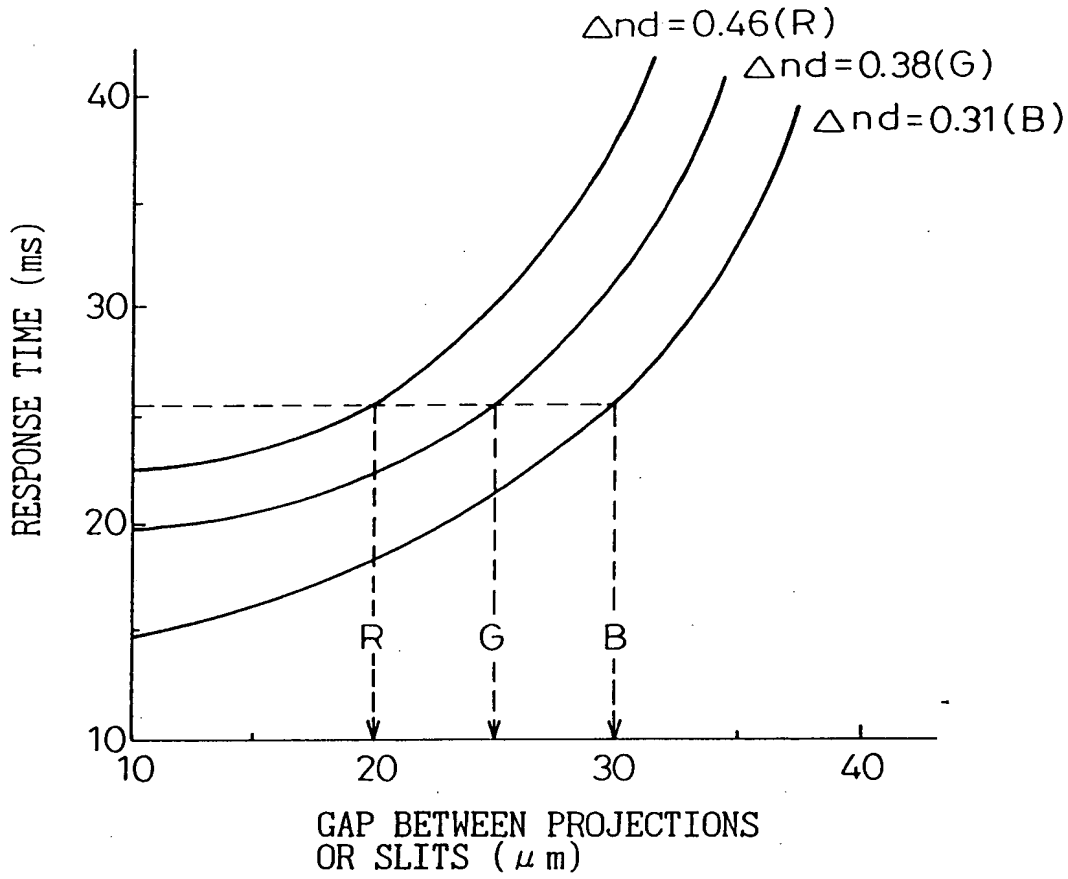

Δnd=0.46(R)
Δnd=0.38(G)
Δnd=0.31(B)
RESPONSE TIME (ms)
40
30
20
10
R
G
B
10
20
30
40
GAP BETWEEN PROJECTIONS
OR SLITS (μm)

Fig.130

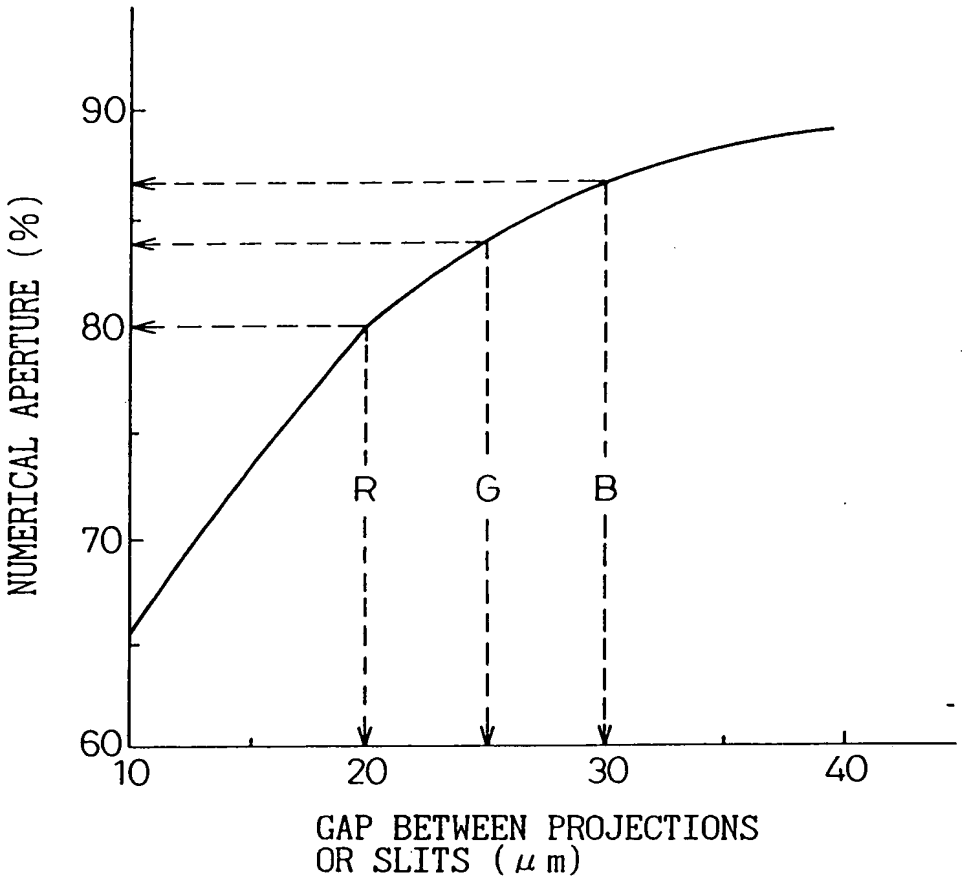

90
80
70
60
NUMERICAL APERTURE (%)
R
G
B
10
20
30
40
GAP BETWEEN PROJECTIONS
OR SLITS (μm)

Fig.131

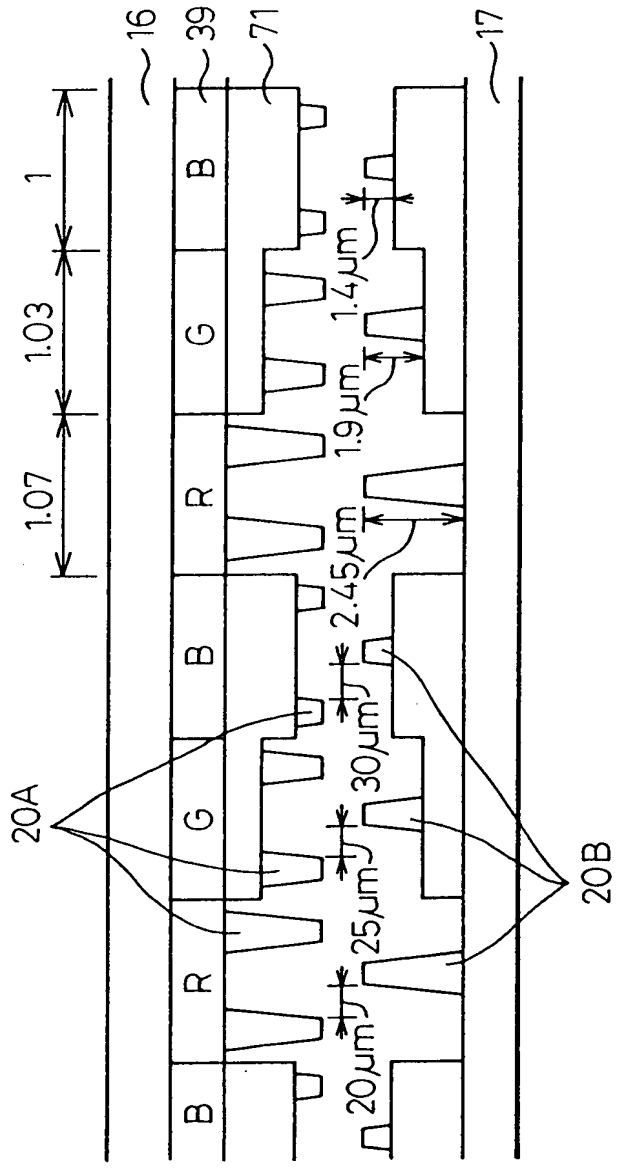

AREA RATIO
1.07
1.03
1
16
39
71
17
B
G
R
B
G
R
B
20A
20B
1.4μm
1.9μm
2.45μm
30μm
25μm
20μm

Fig.132

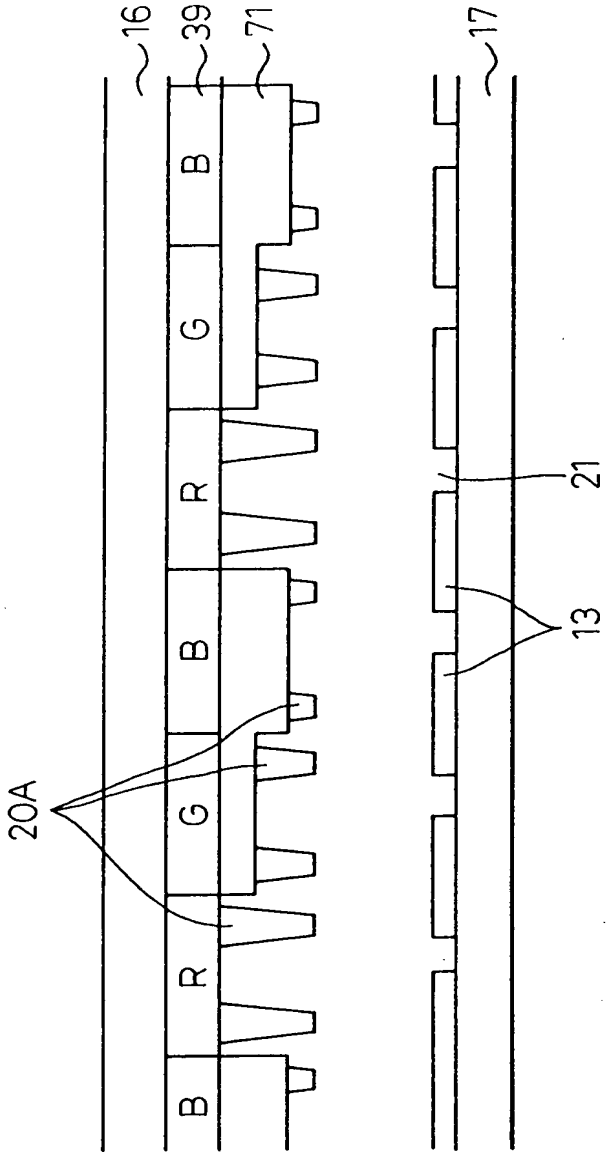


Fig.133

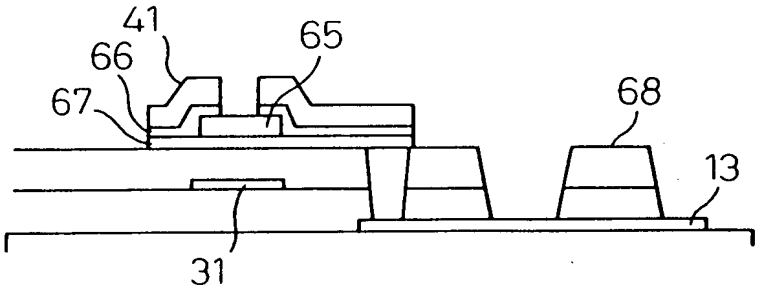


Fig.134A

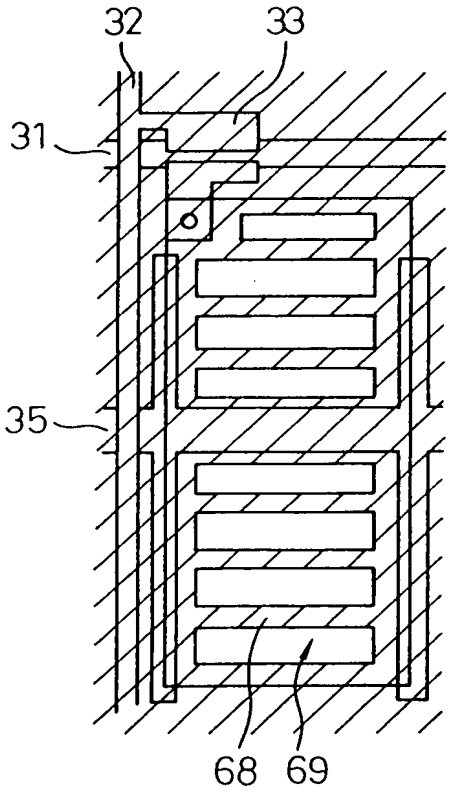


Fig.134B

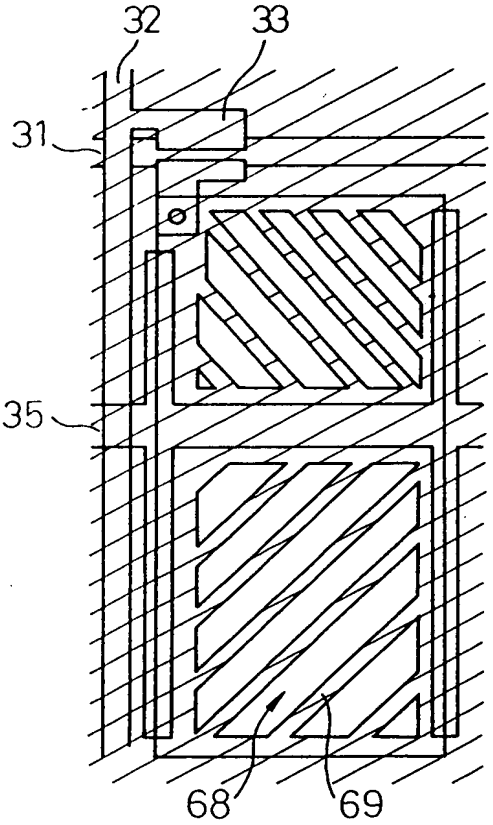


Fig.135

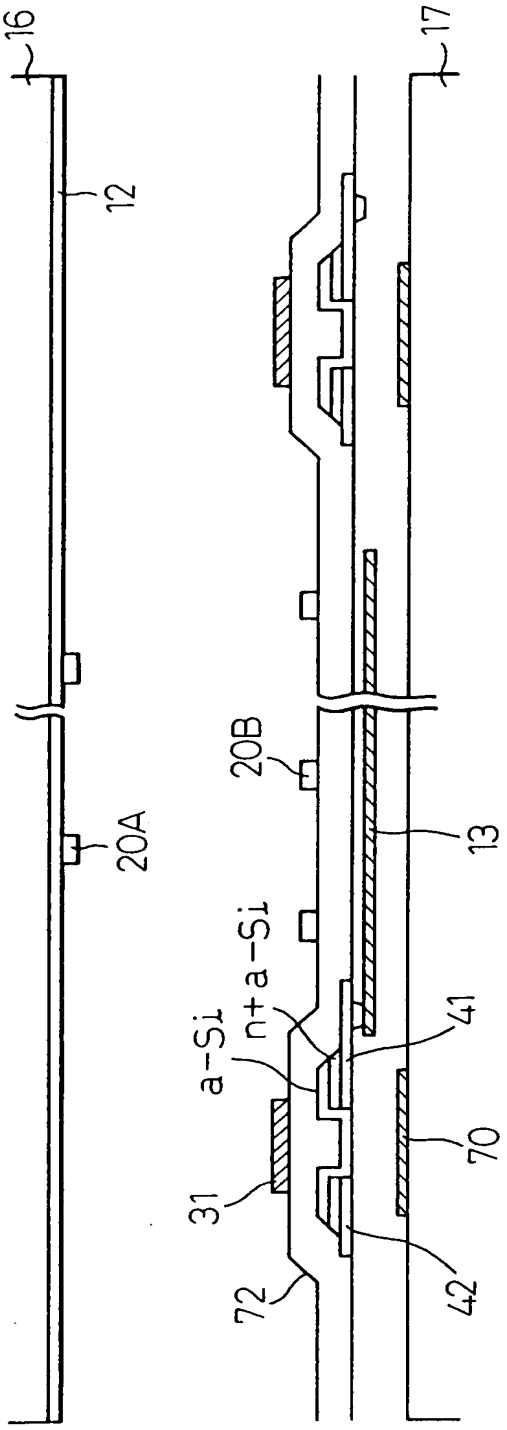


Fig.136A

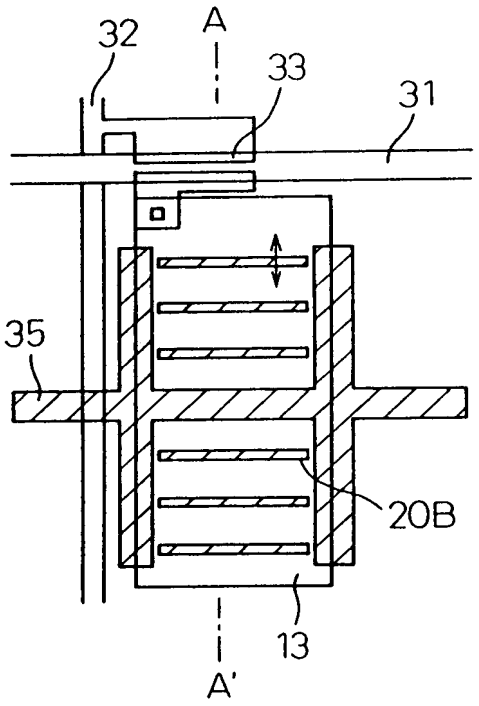
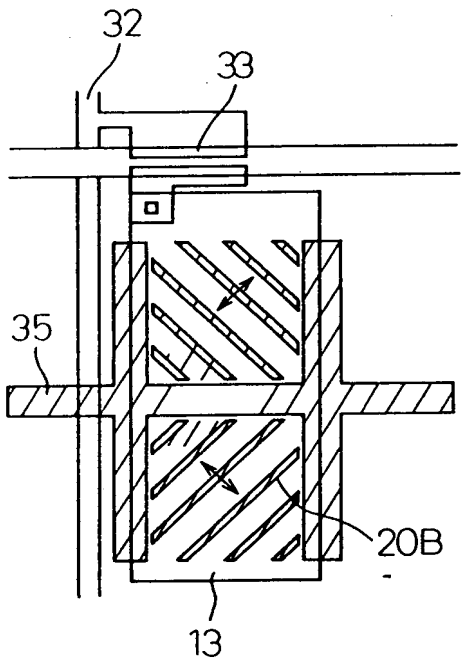


Fig.136B



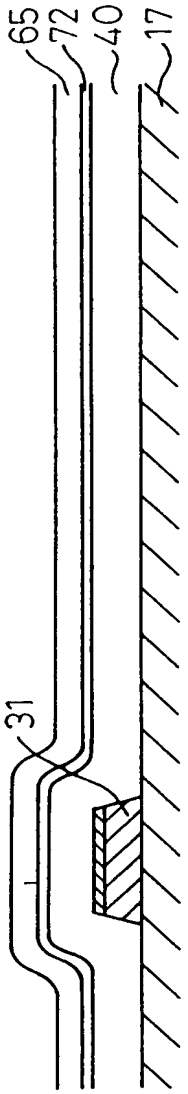


Fig.137A

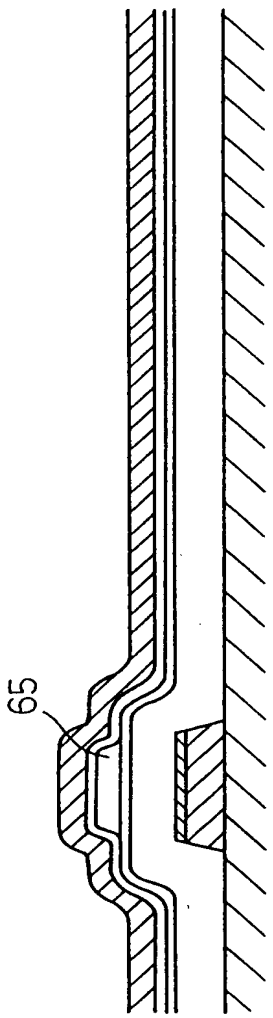


Fig.137B

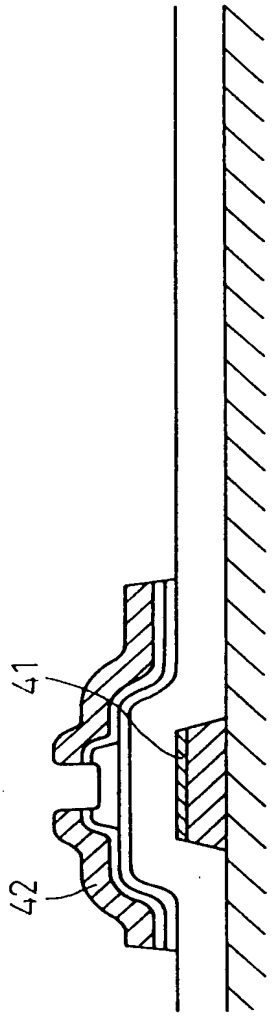


Fig.137C

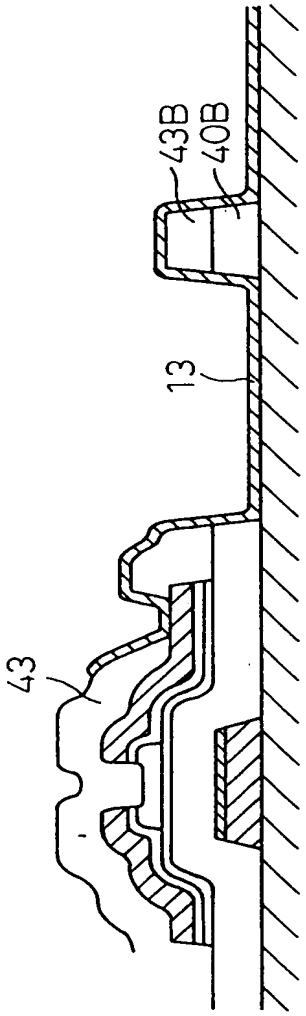
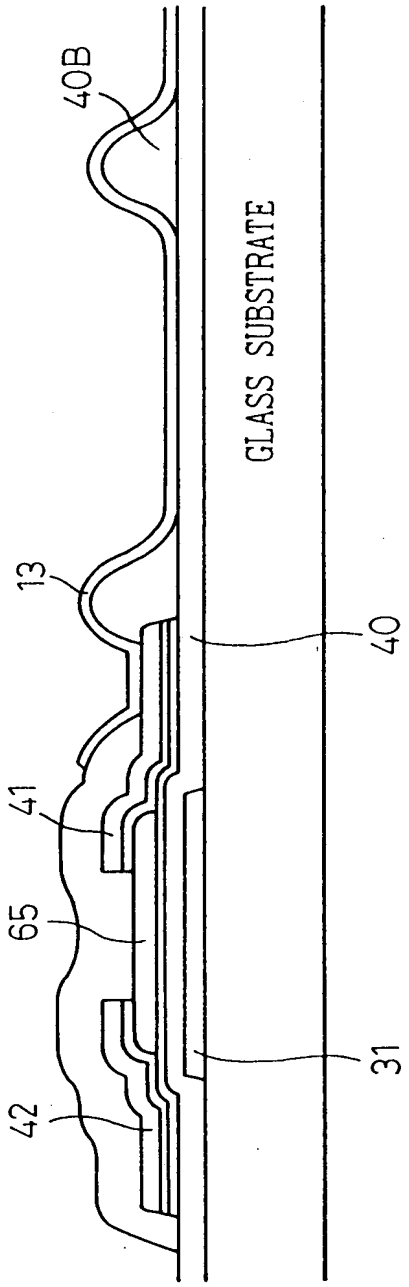


Fig.137D

Fig.138



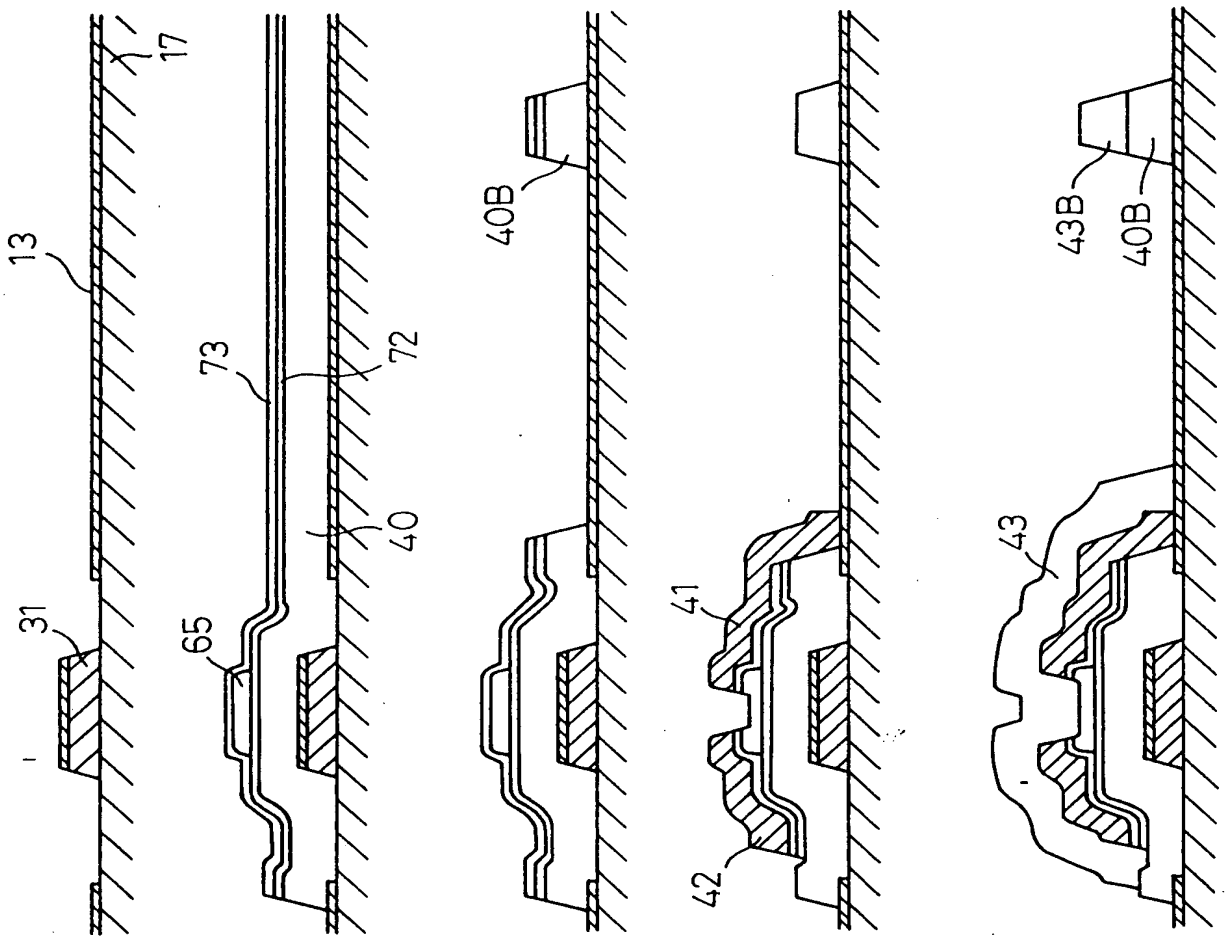


Fig.139A

Fig.139B

Fig.139C

Fig.139D

Fig.139E

Fig.140A

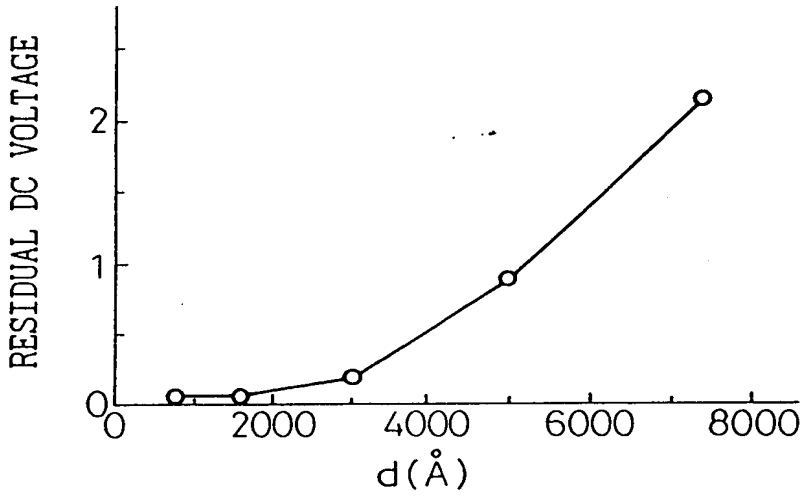


Fig.140B

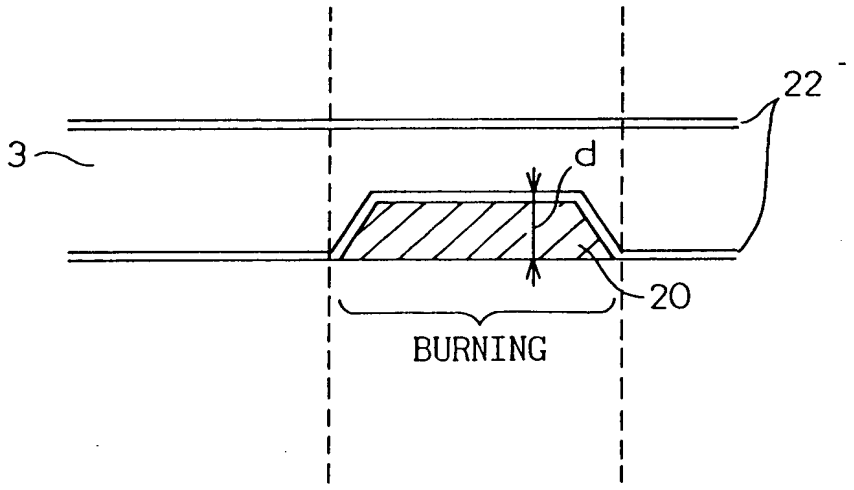


Fig.141A

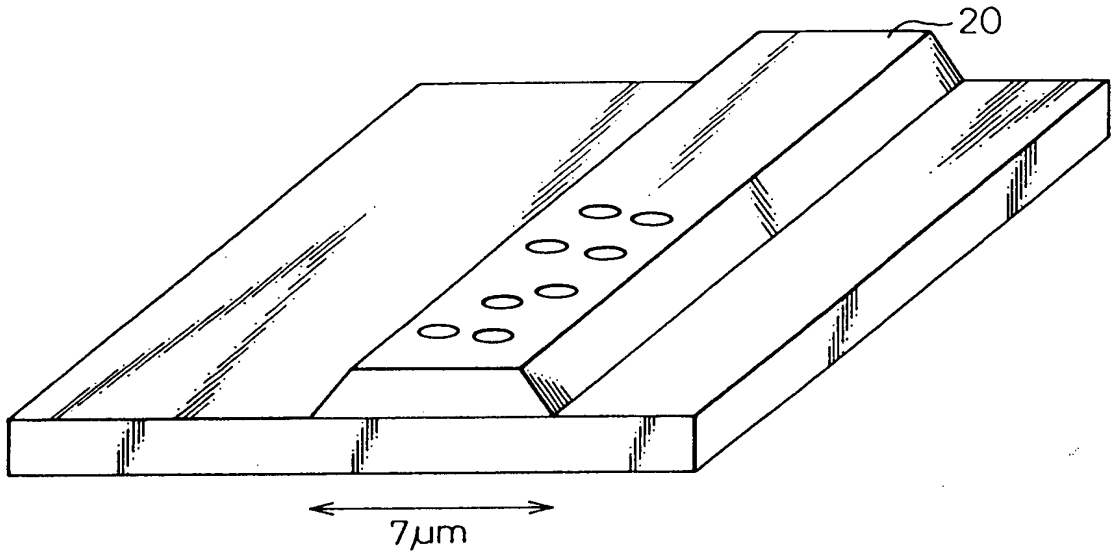


Fig.141B

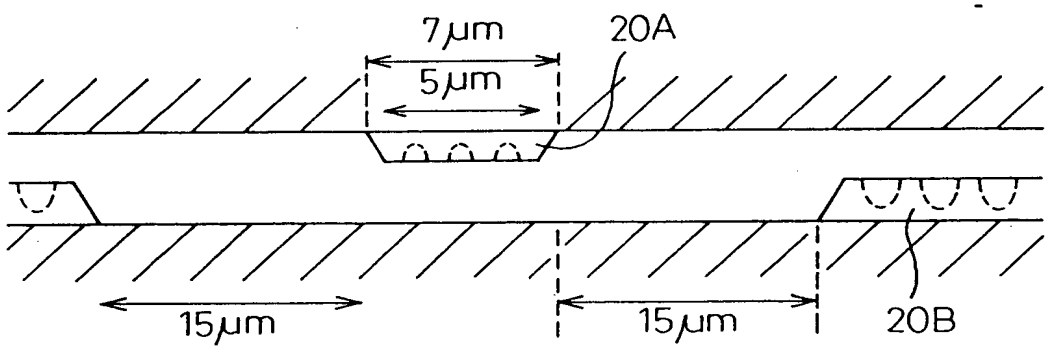


Fig.142A

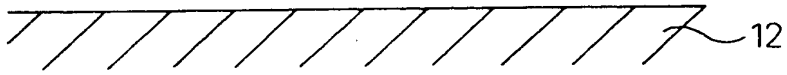


Fig.142B

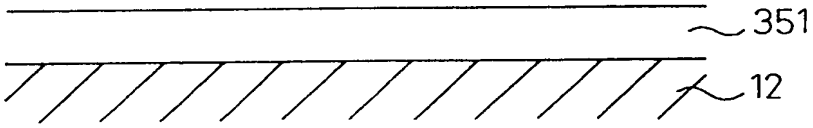


Fig.142C

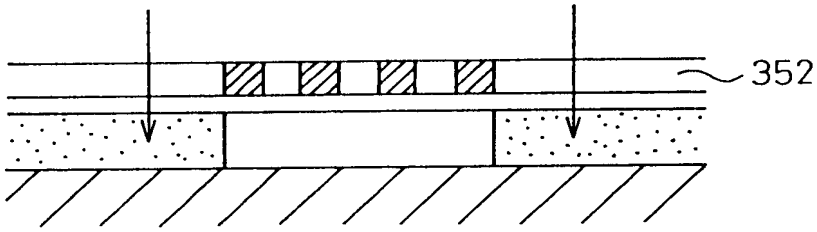


Fig.142D

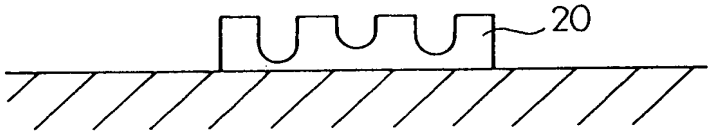


Fig.142E

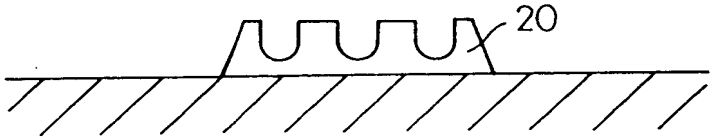


Fig.143

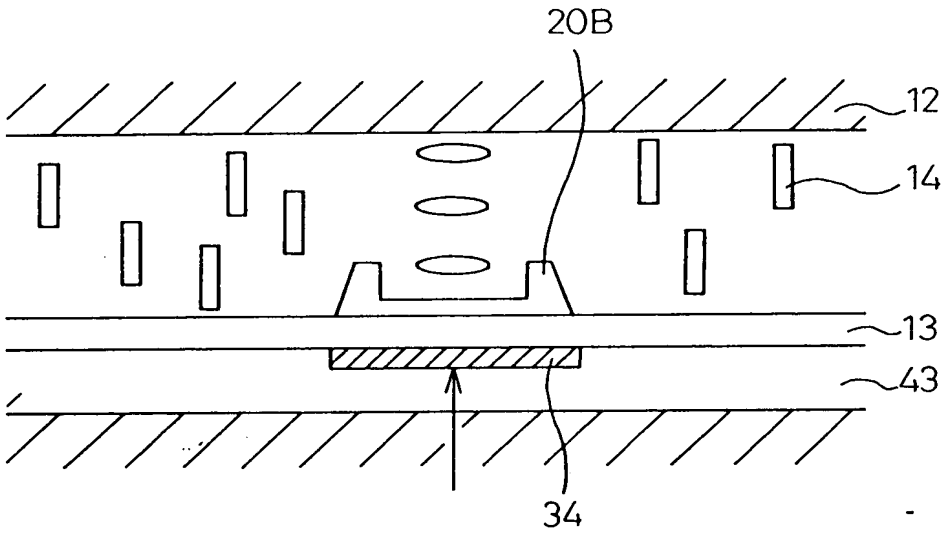


Fig.144A

BEFORE BAKING

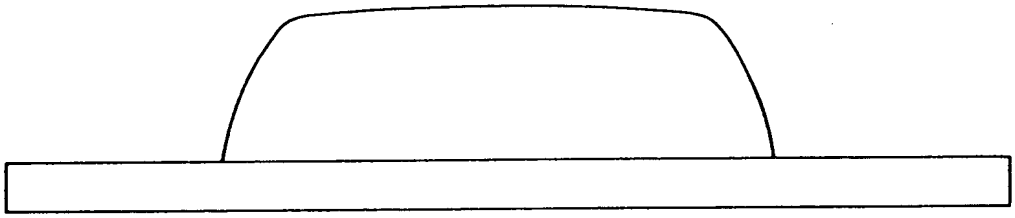


Fig.144B

AFTER BAKING

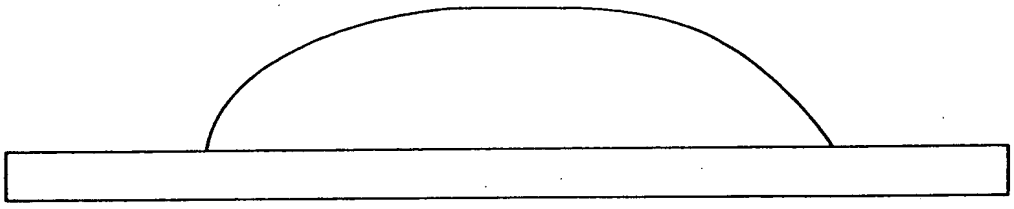


Fig.145A NO BAKING

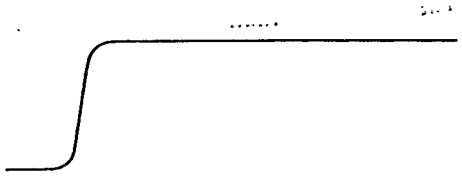


Fig.145B 120°C

Fig.145C 130°C

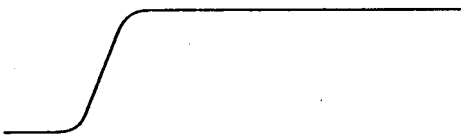


Fig.145D 140°C

Fig.145E 150°C

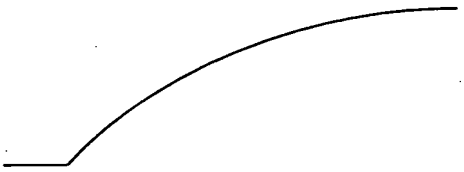


Fig.146A

2μm WIDTH

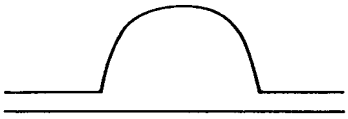


Fig.146B

5μm WIDTH

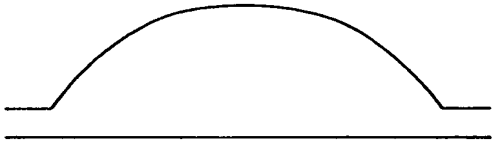


Fig.146C

10μm WIDTH

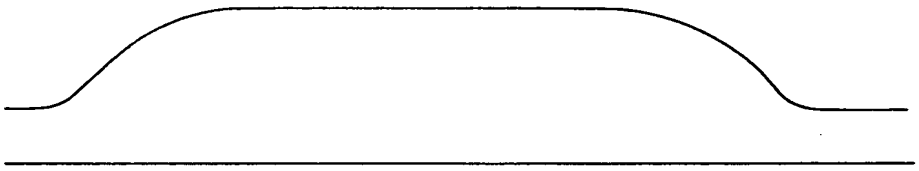


Fig. 147A

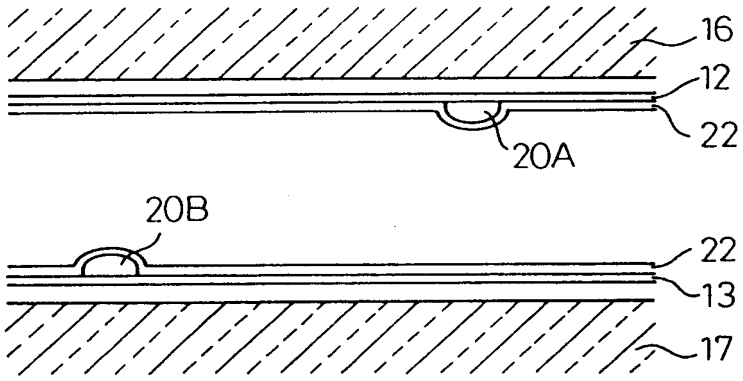


Fig. 147B

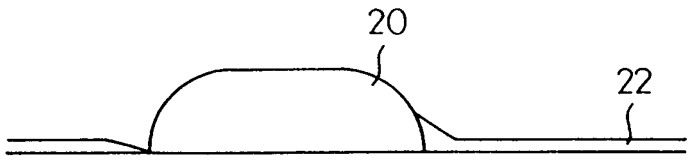


Fig.148A

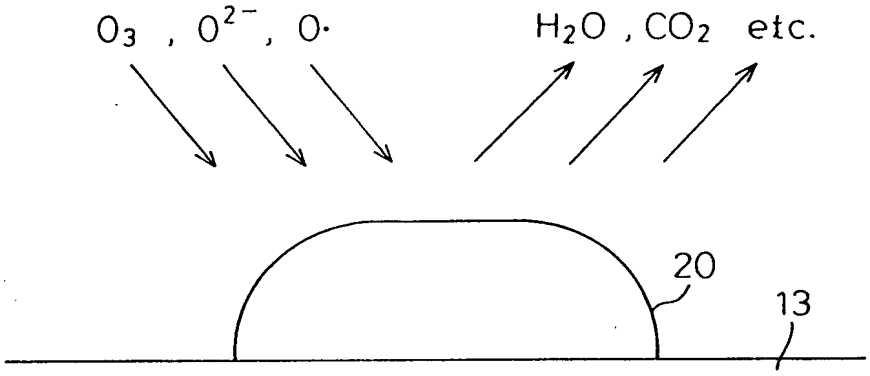


Fig.148B

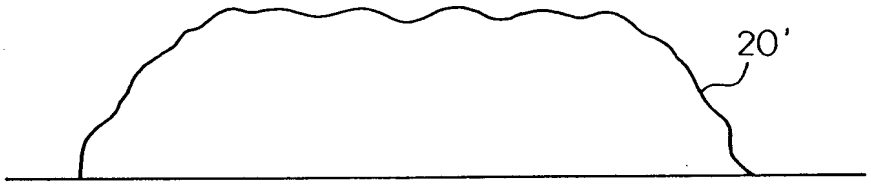


Fig.148C

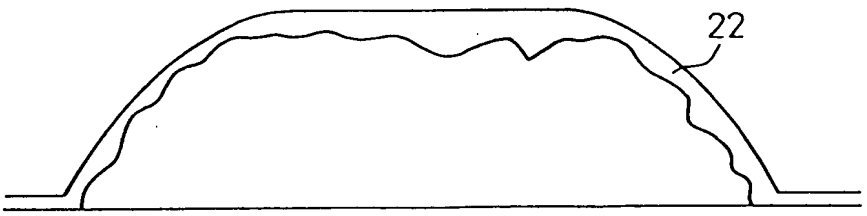


Fig.149A

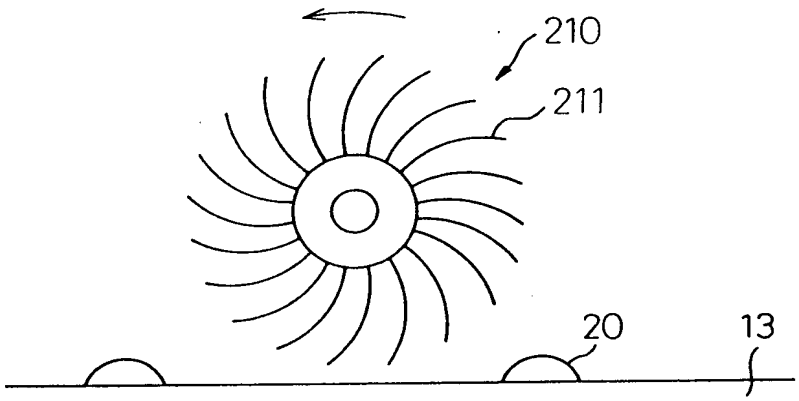


Fig.149B

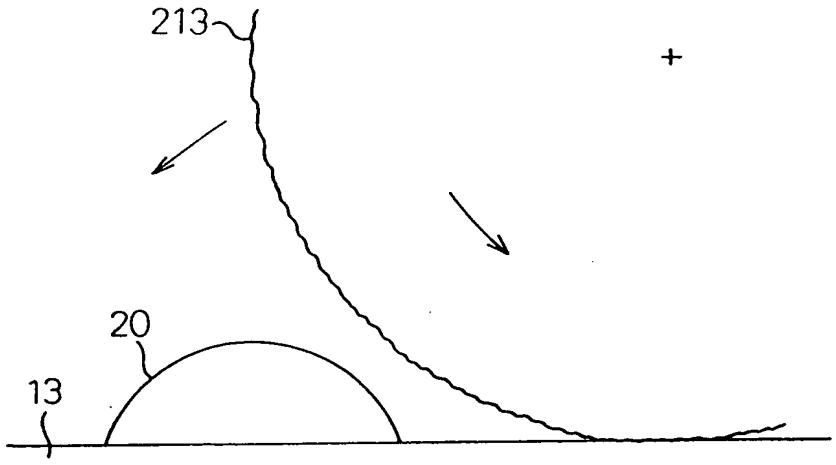


Fig.150

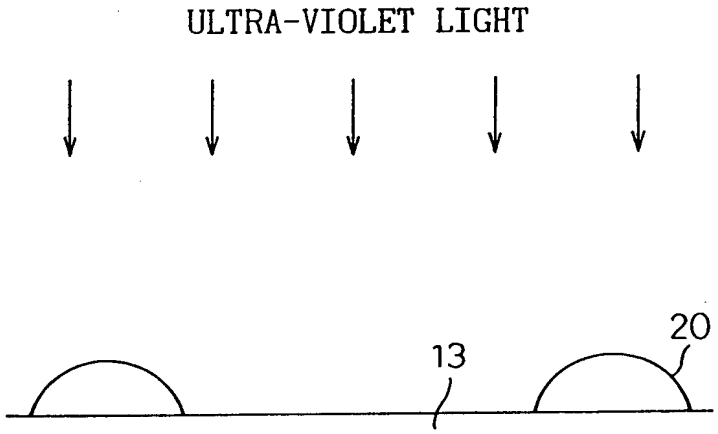


Fig.151A

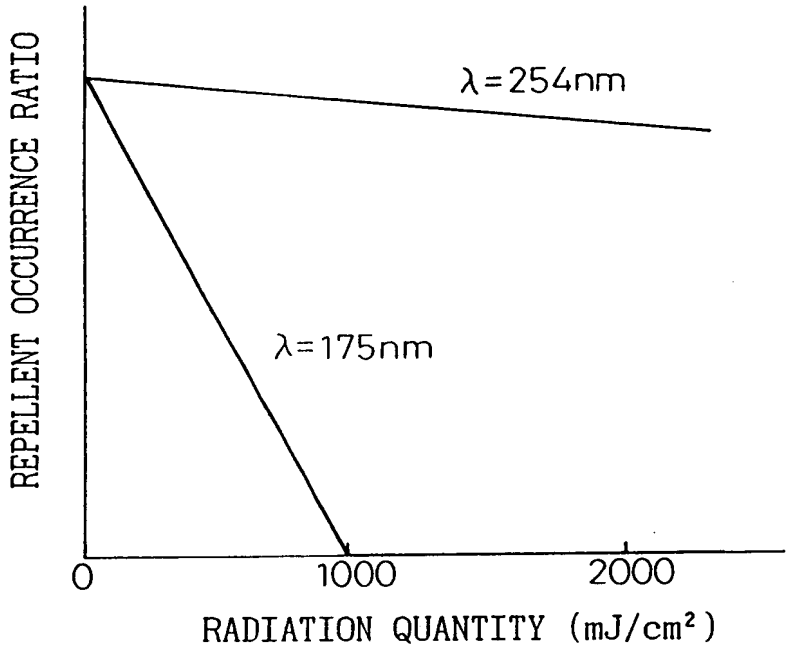


Fig.151B

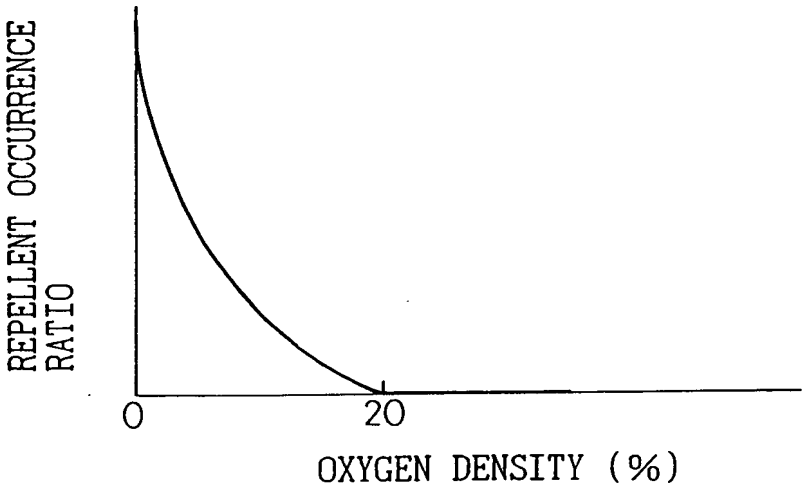


Fig.152A

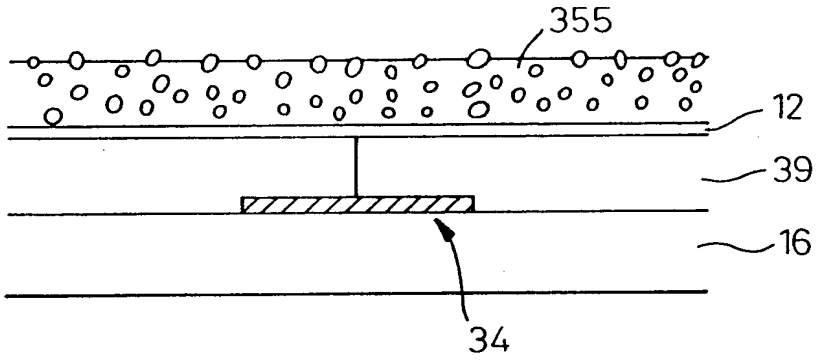


Fig.152B

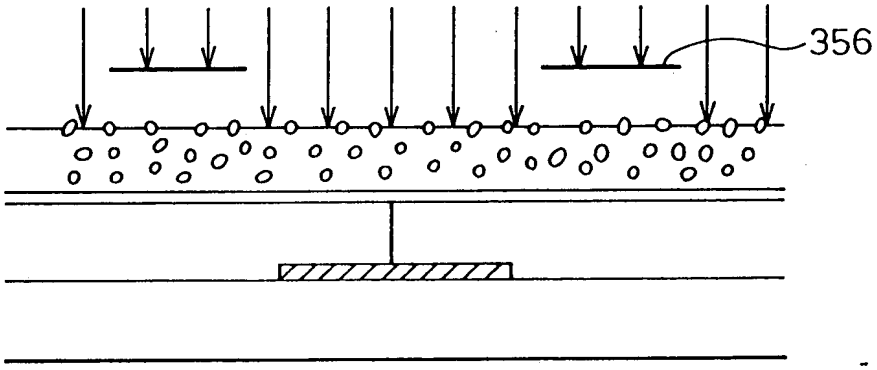


Fig.152C

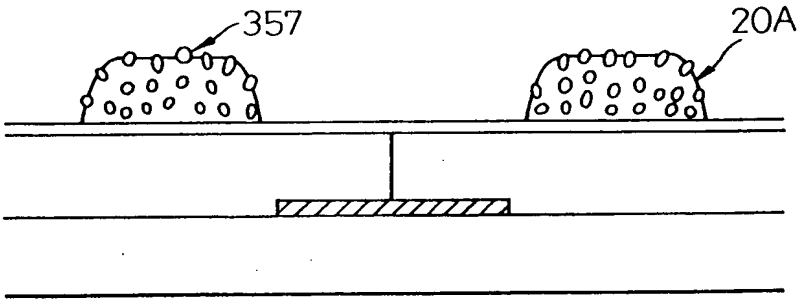


Fig.153A

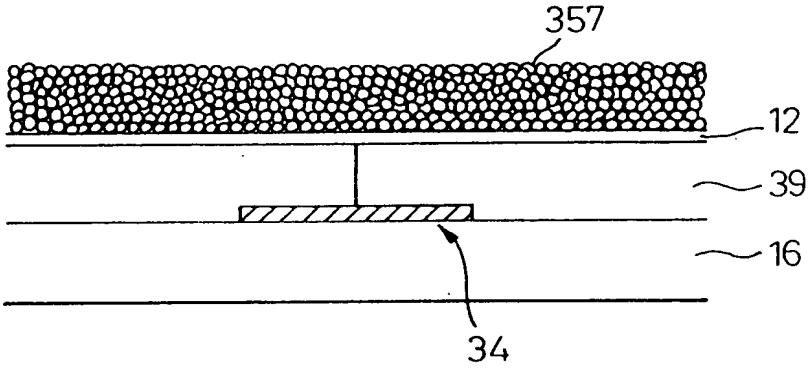


Fig.153B

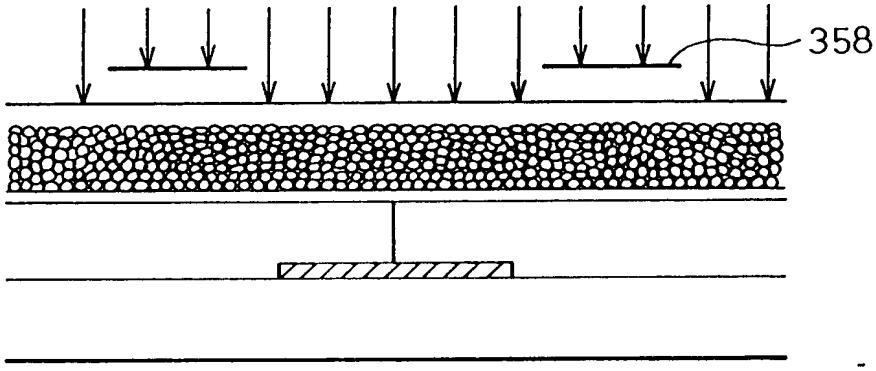


Fig.153C

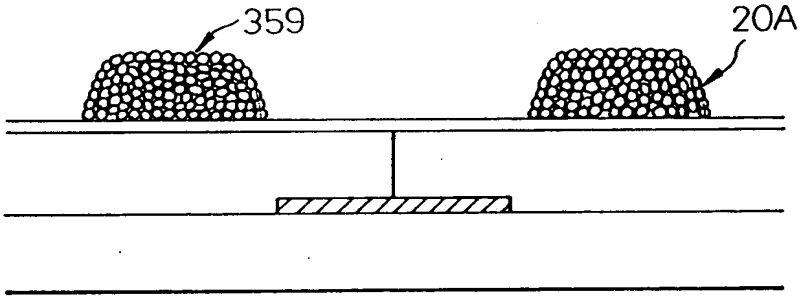


Fig.154A

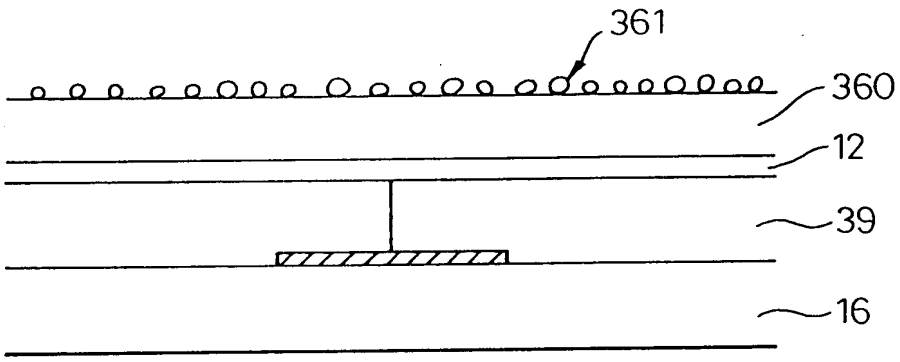


Fig.154B

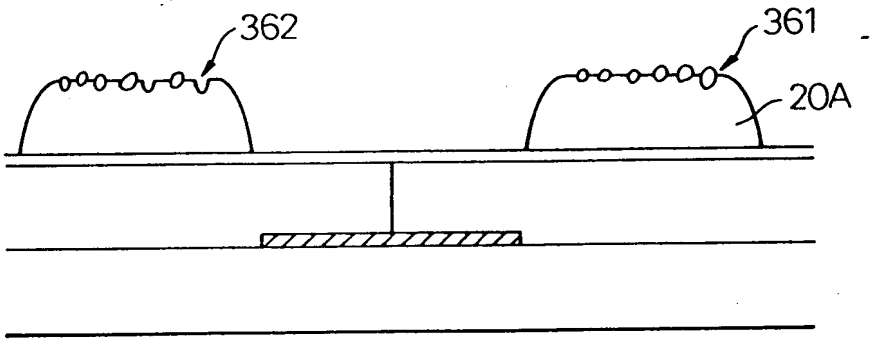


Fig.155A

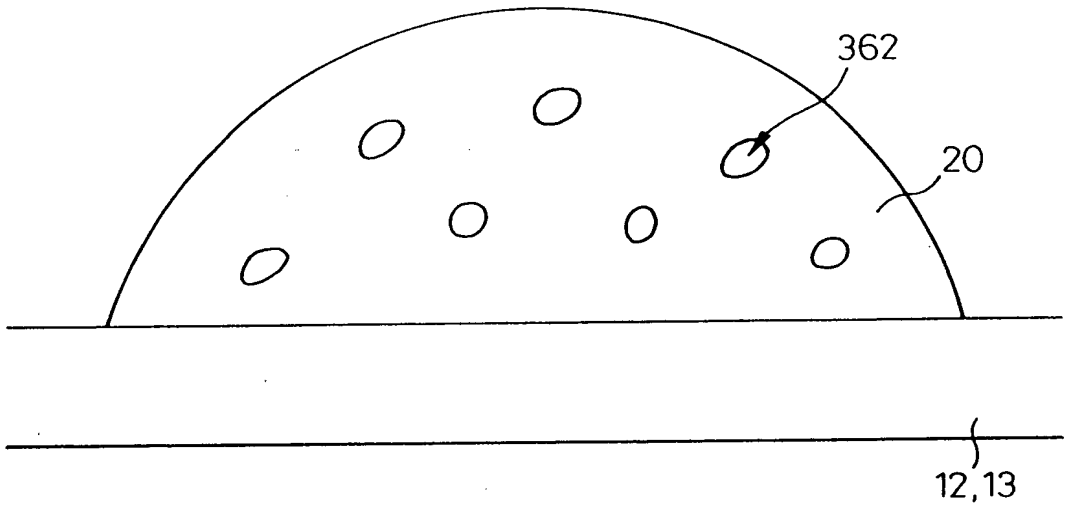


Fig.155B

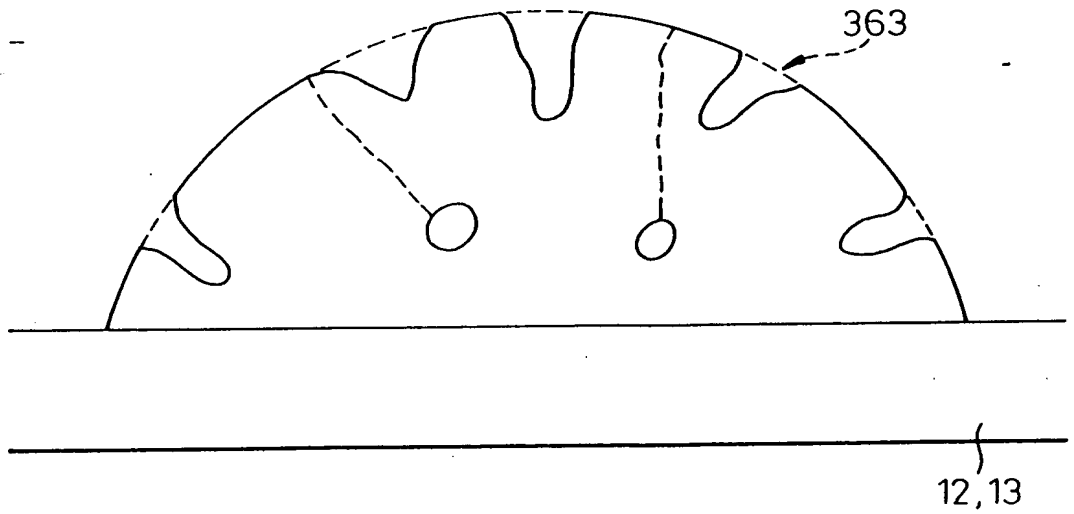


Fig.156

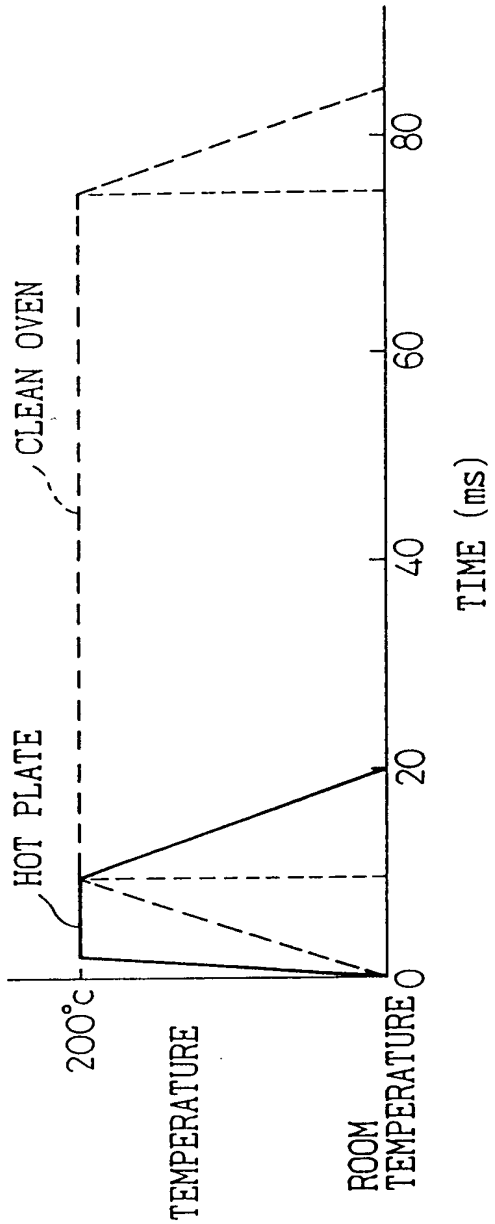

CLEAN OVEN
HOT PLATE
200°c
TEMPERATURE
ROOM TEMPERATURE
0
20
40
60
80
TIME (ms)

Fig.157A

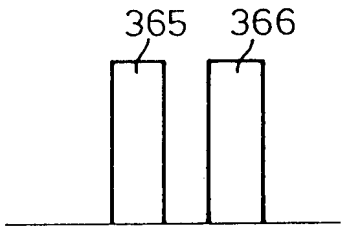


Fig.157B

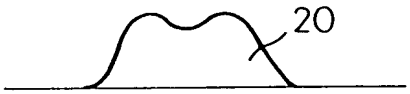


Fig.157C

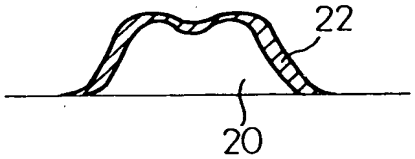


Fig.158

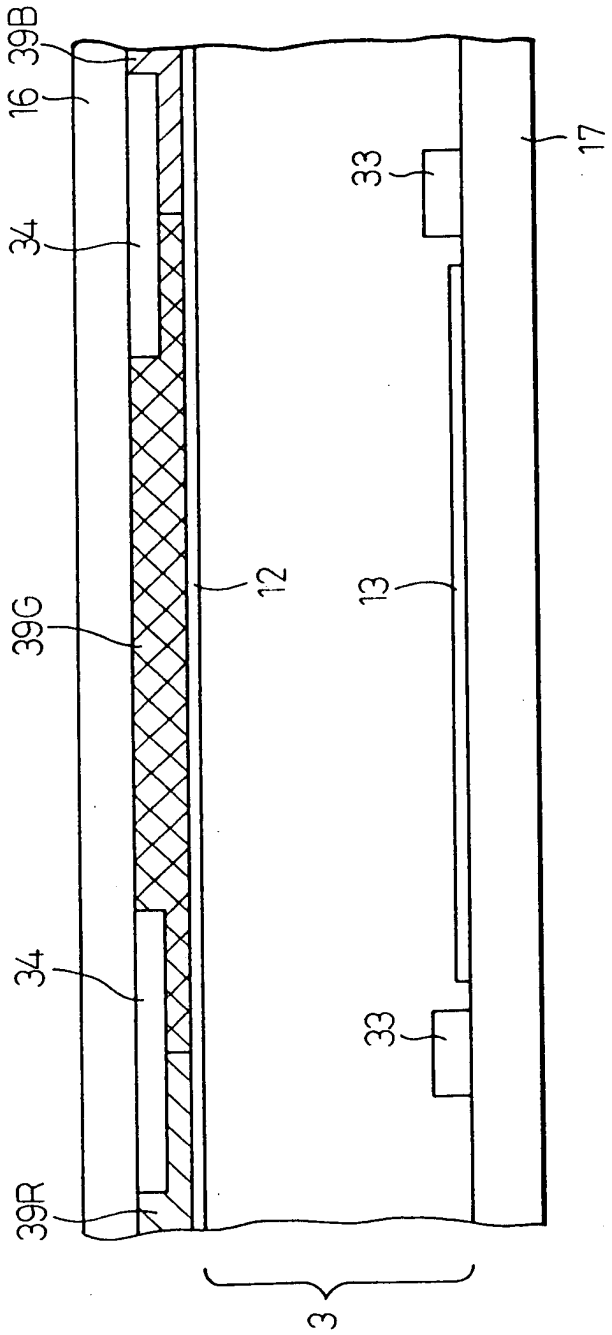


Fig.159

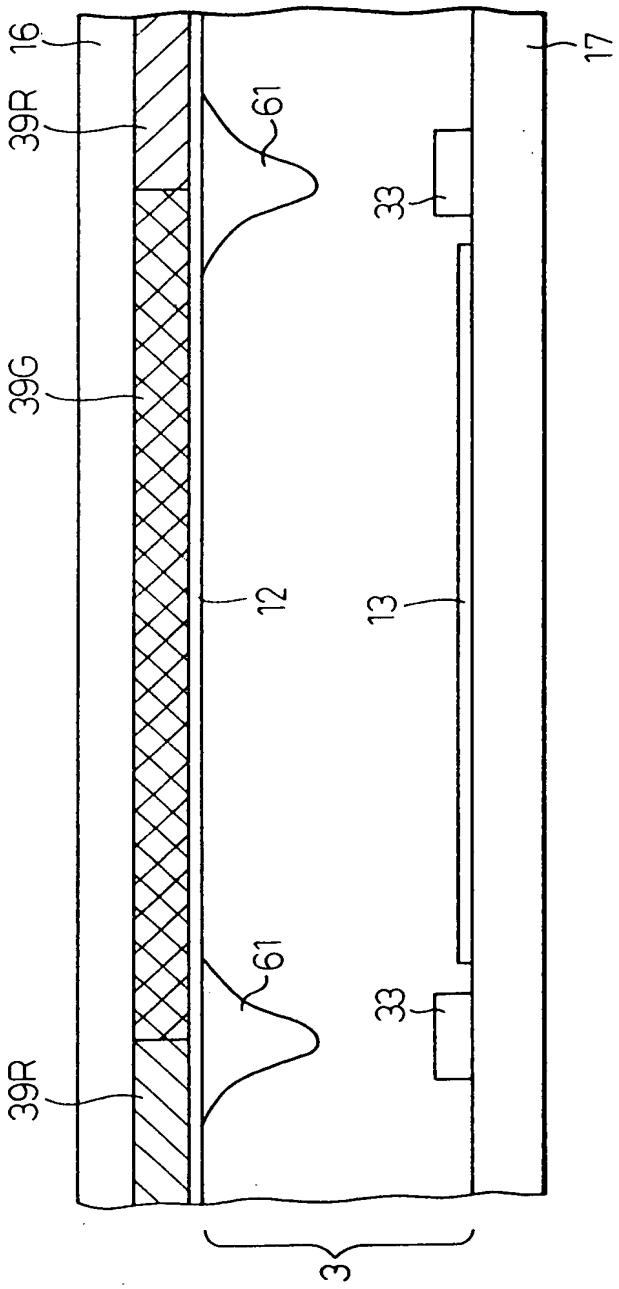
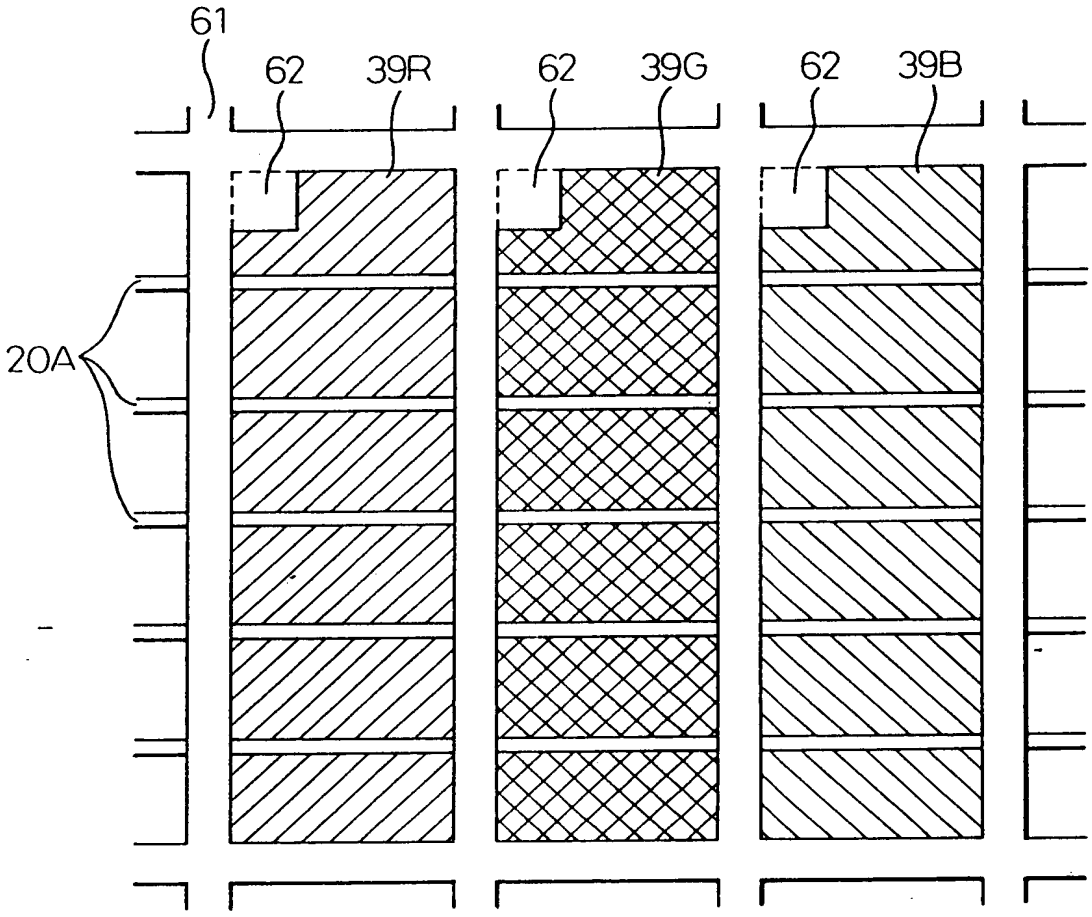


Fig.160



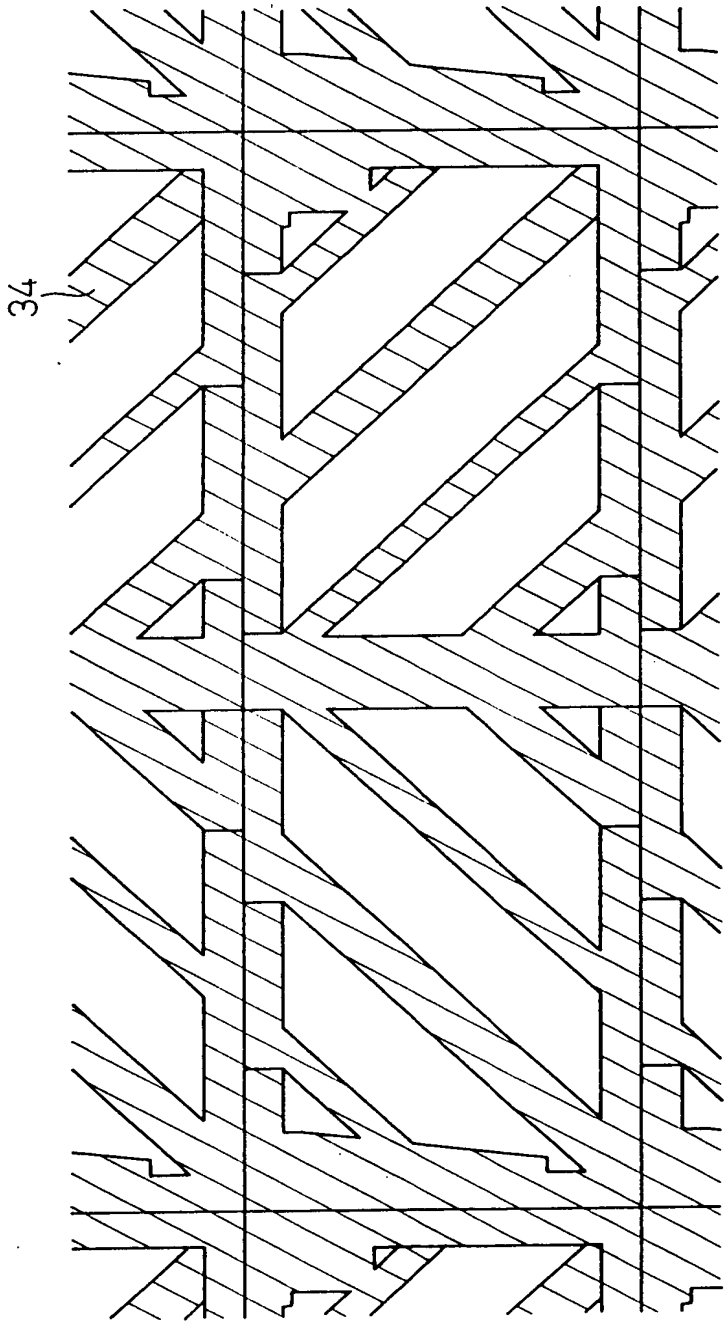


Fig.161

Fig.162

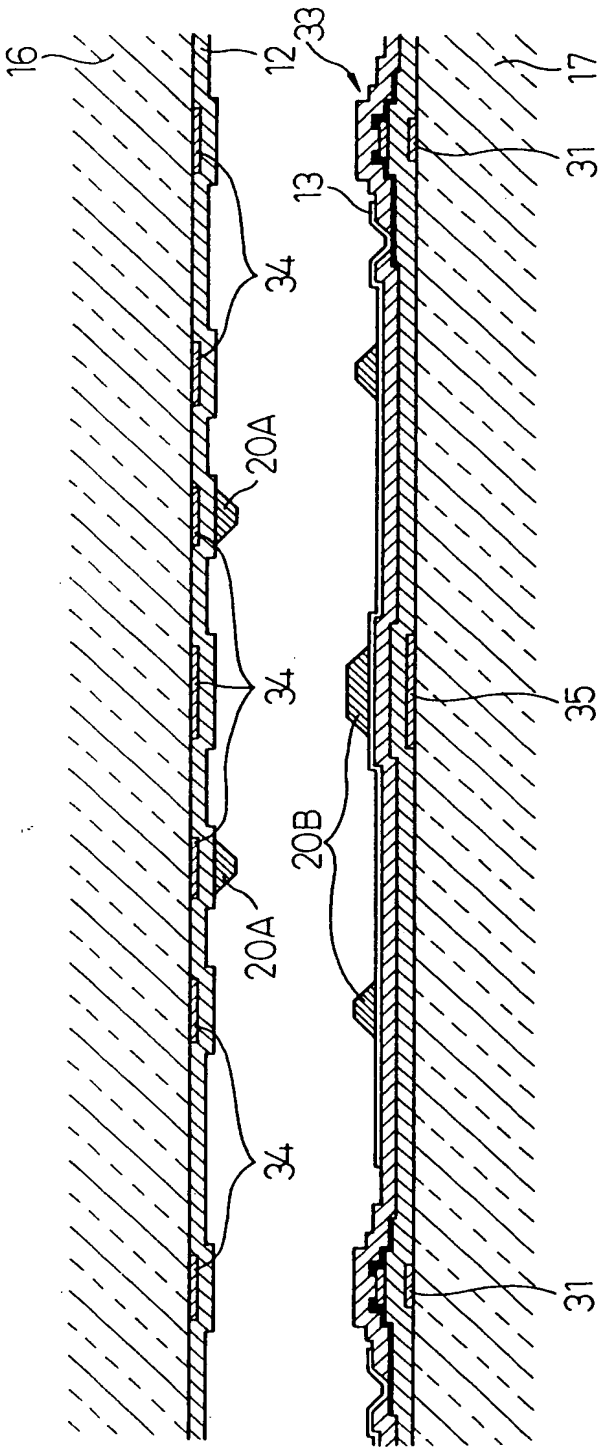


Fig.163

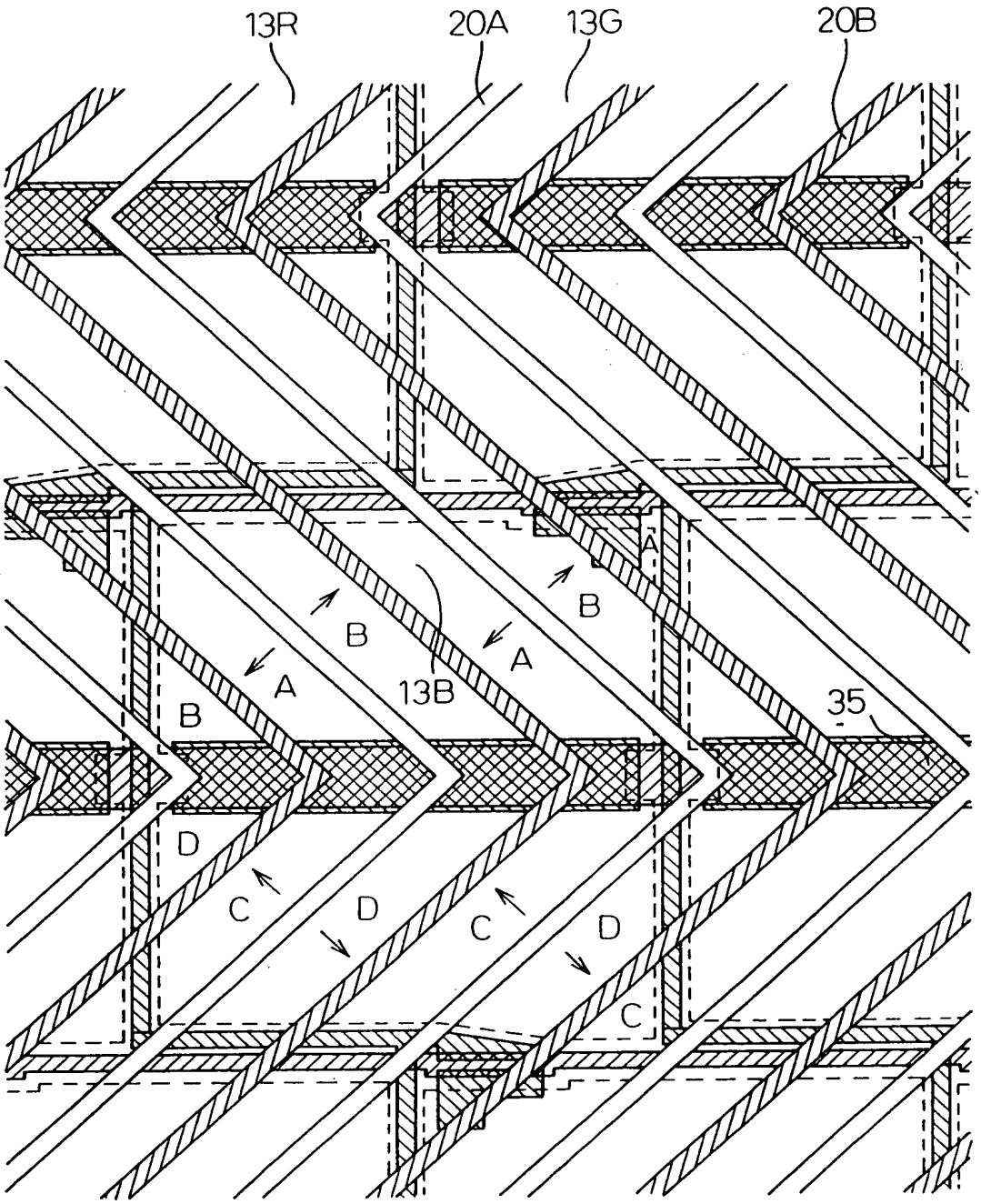


Fig.164

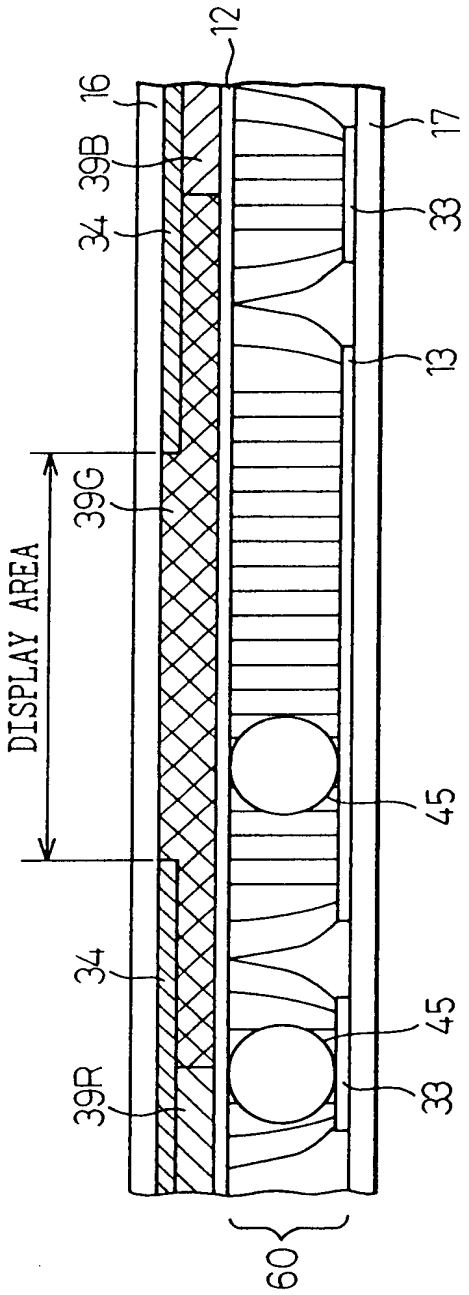


Fig.165A

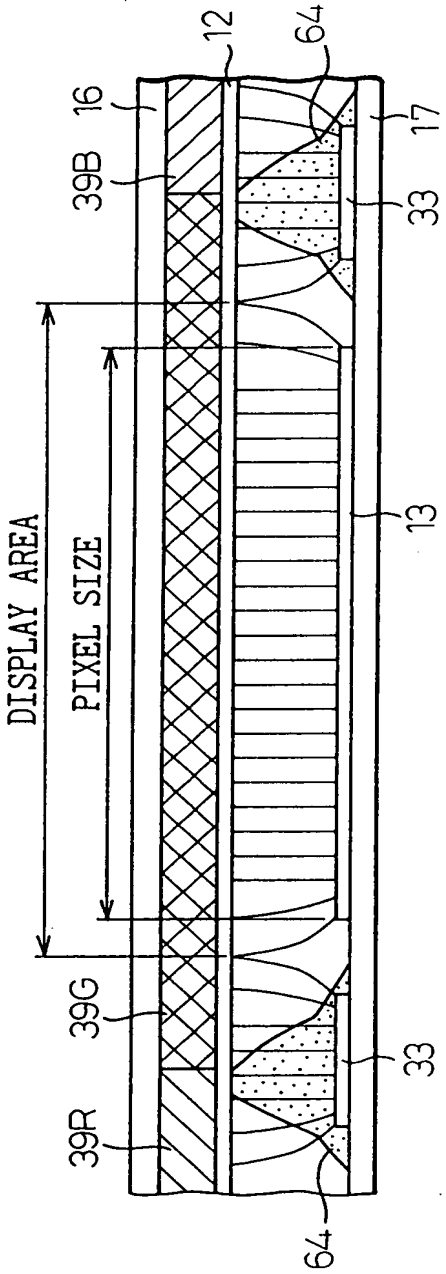


Fig.165B

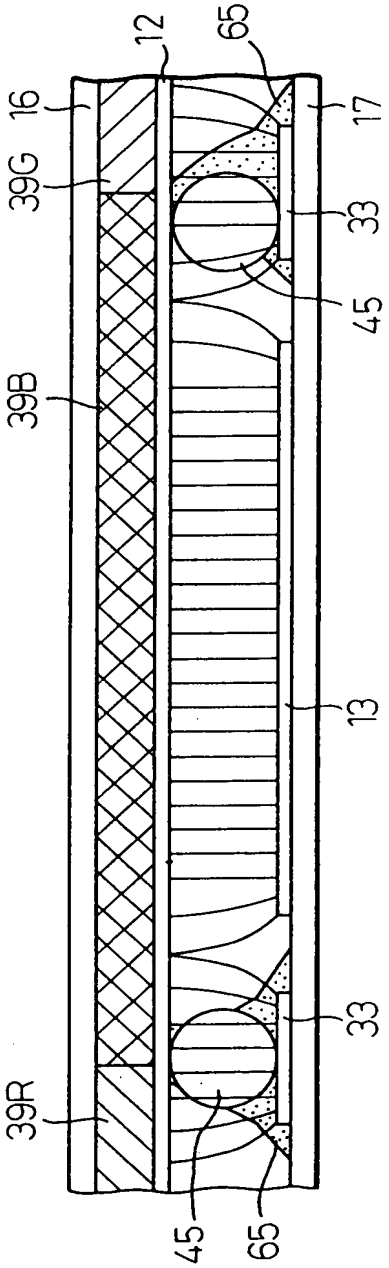


Fig.166A

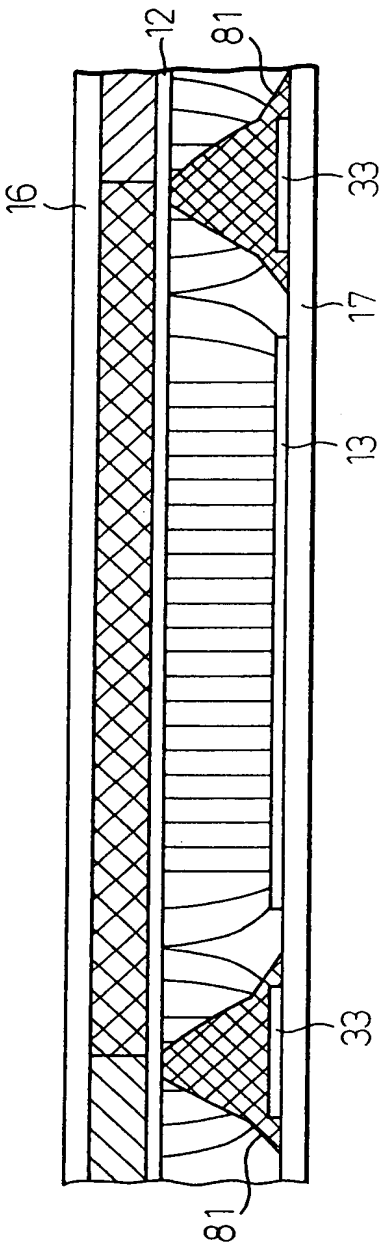
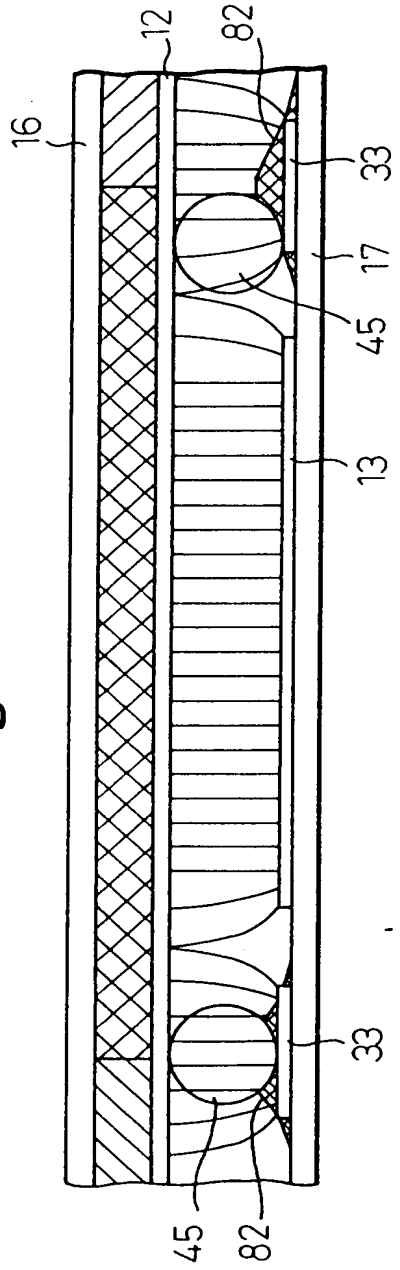


Fig.166B



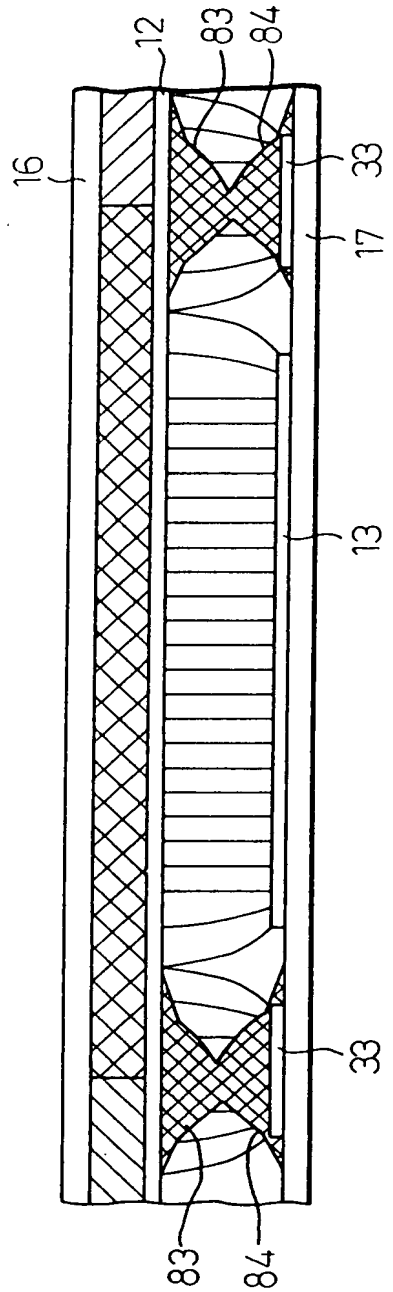


Fig.167

Fig.168A

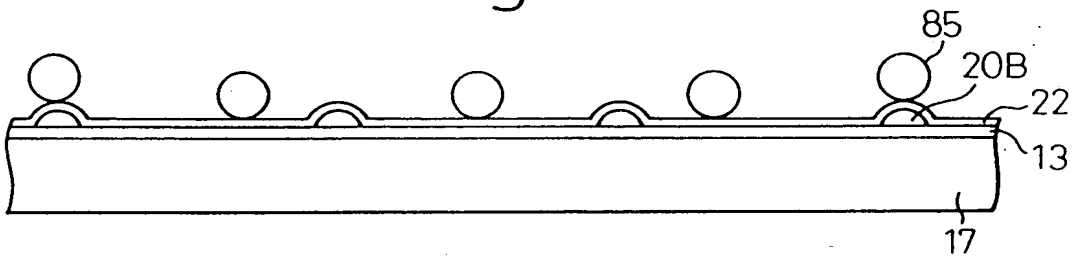


Fig.168B

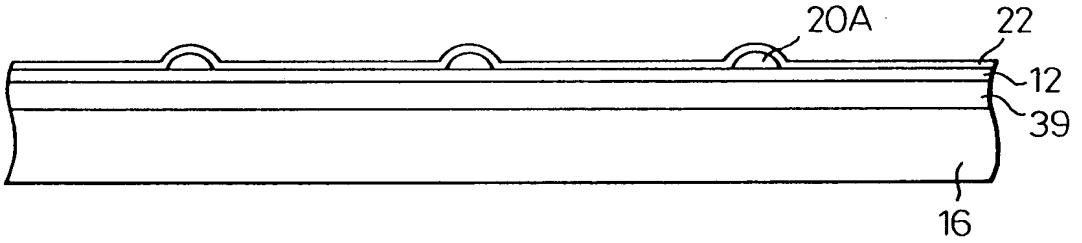


Fig.168C

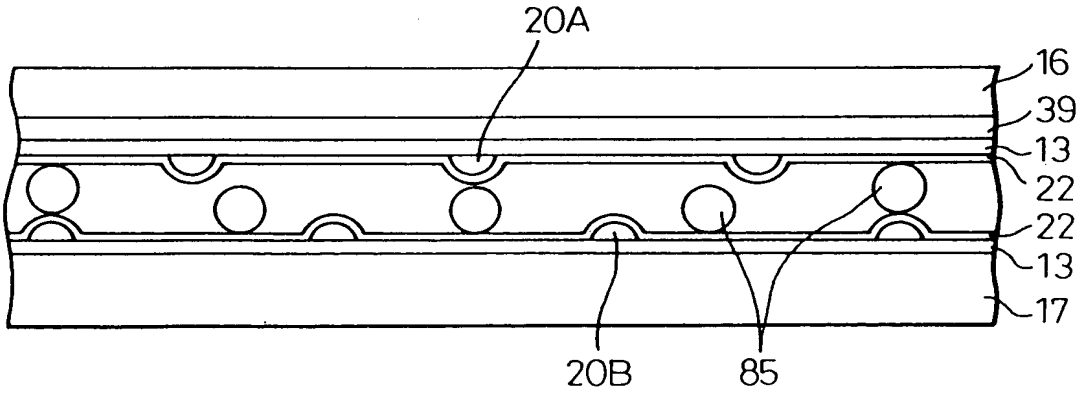


Fig.169

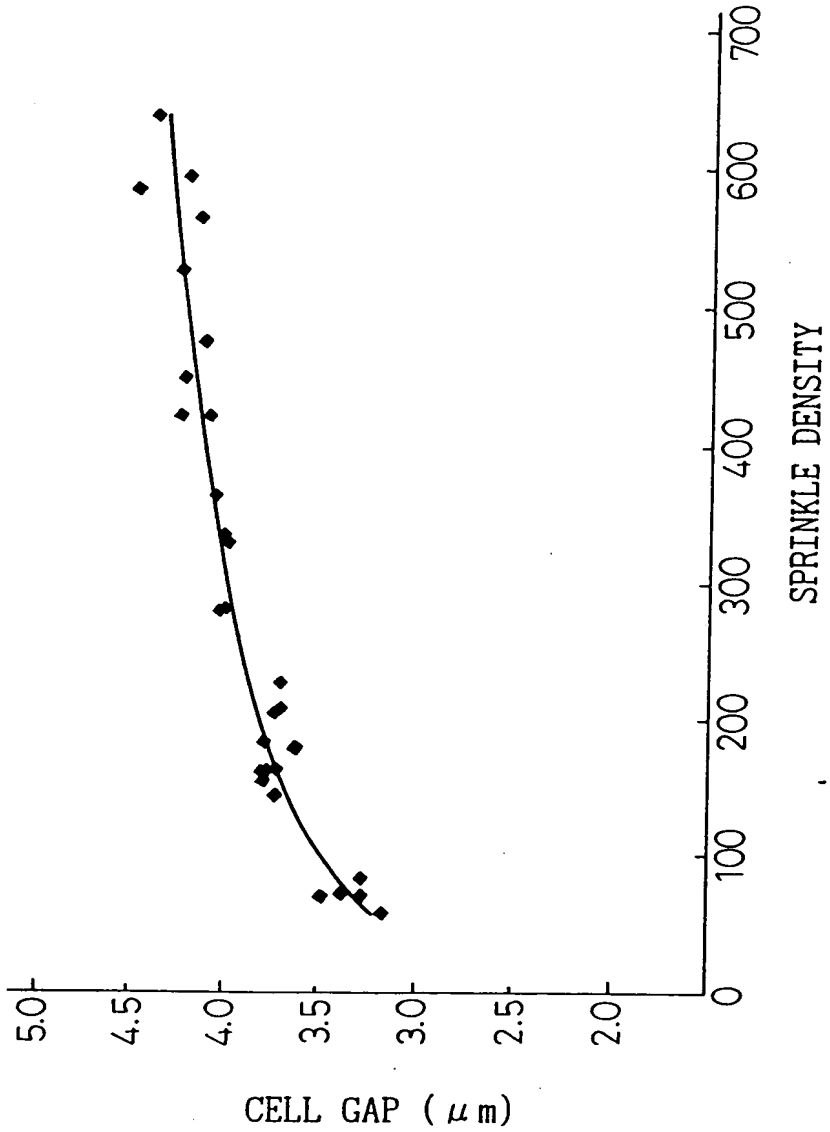
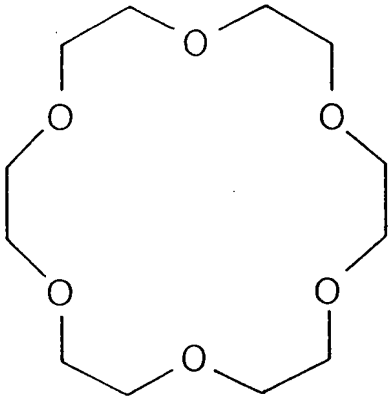

5.0
4.5
4.0
3.5
3.0
2.5
2.0
CELL GAP (μm)
0
100
200
300
400
500
600
700
SPRINKLE DENSITY

Fig.170

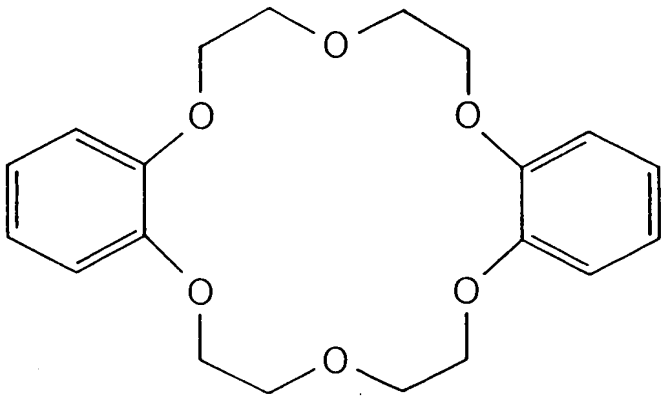
SPRINKLE DENSITY OF SPACERS (NUMBERS/mm²)	50	100	150	200	250	300	350	400	450	500	550
BLEMISH OCCURRENCE DUE TO PUSHING	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
BLEMISH OCCURRENCE DUE TO PULLING	NO	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES

Fig.171A



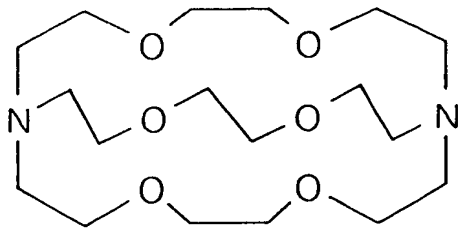
18-CROWN-6

Fig.171B



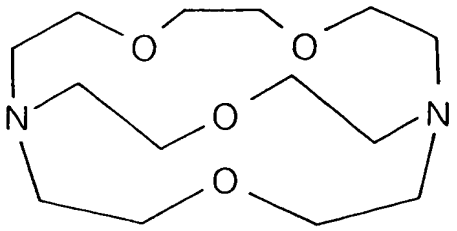
DIBENZOYL-18-CROWN-6

Fig.172A



CRYPTAND [2.2.2]

Fig.172B



CRYPTAND [2.1.1]

Fig.173A

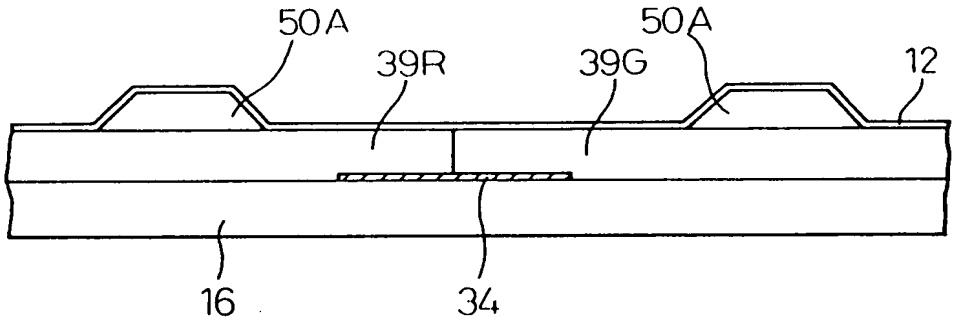


Fig.173B

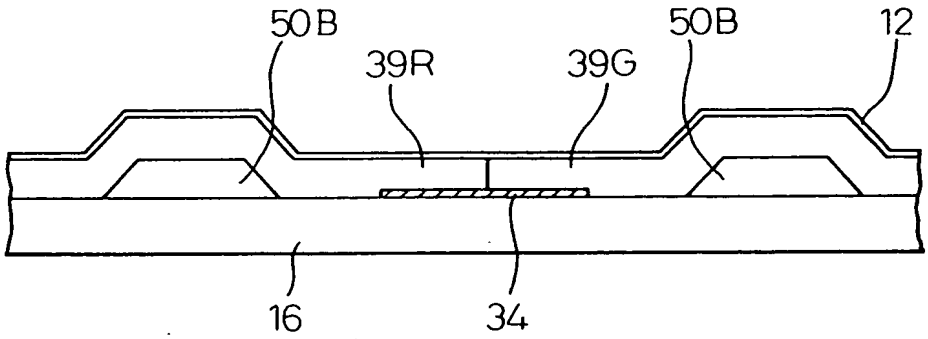


Fig.174

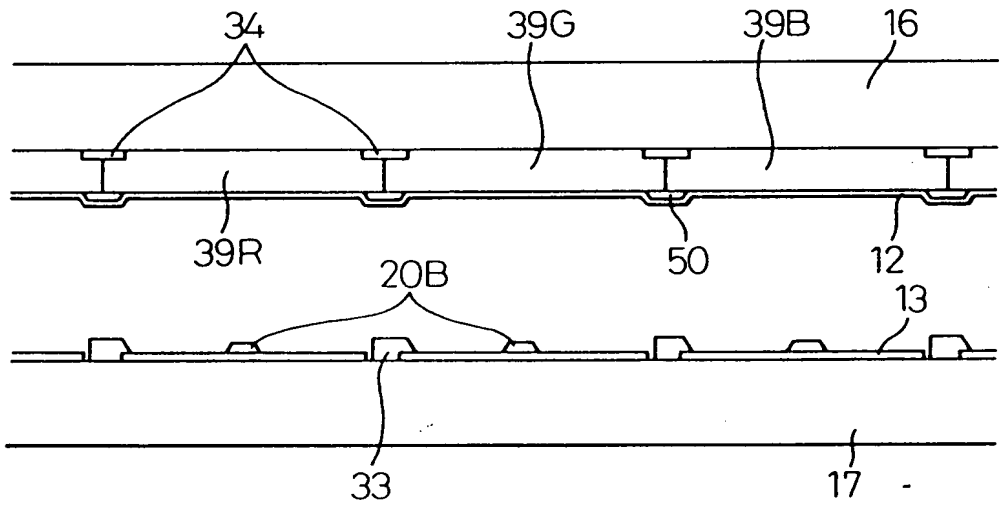


Fig.175A

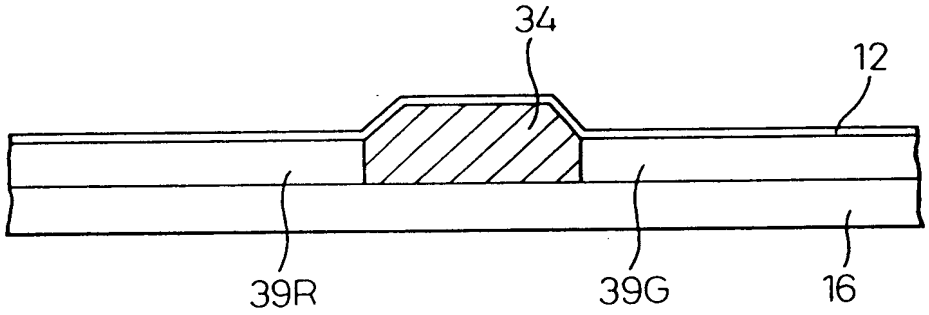


Fig.175B

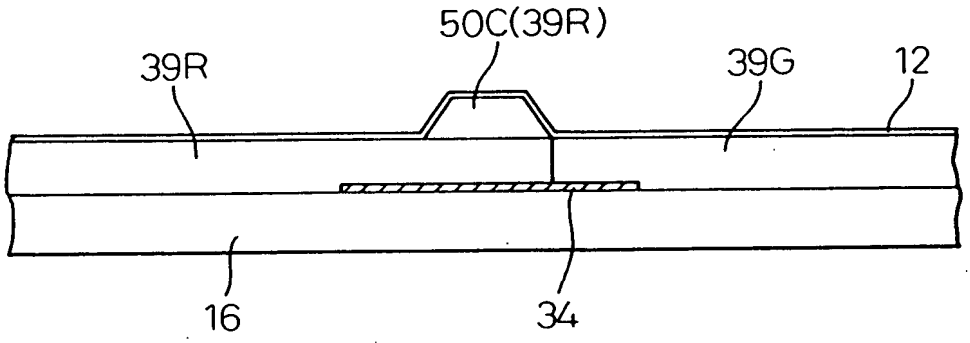


Fig.176A

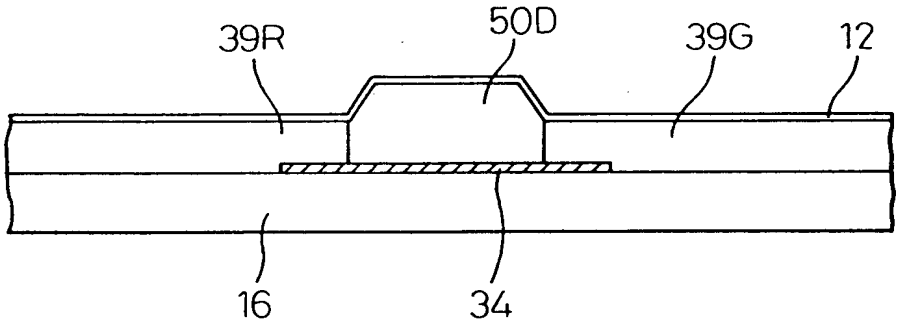


Fig.176B

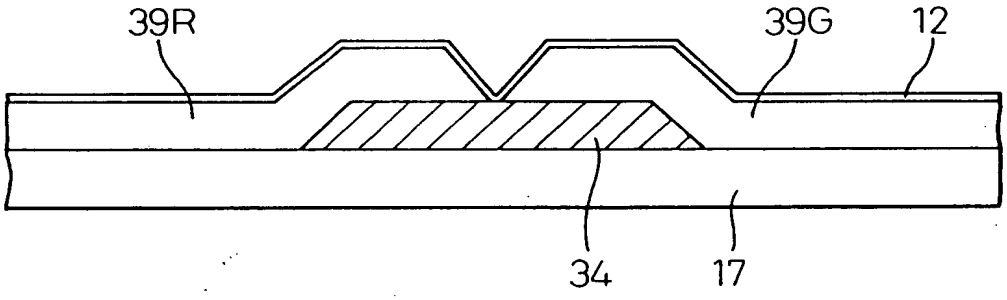


Fig.177A

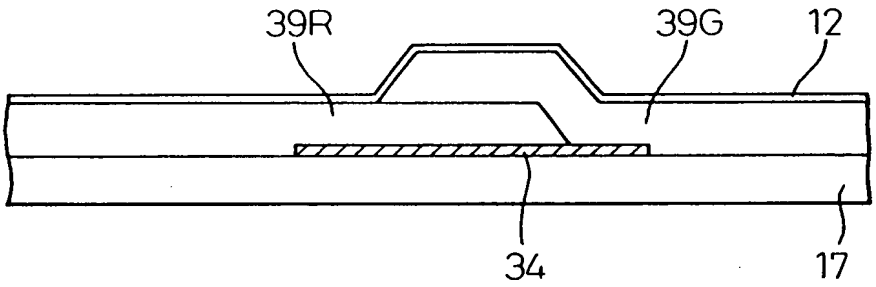
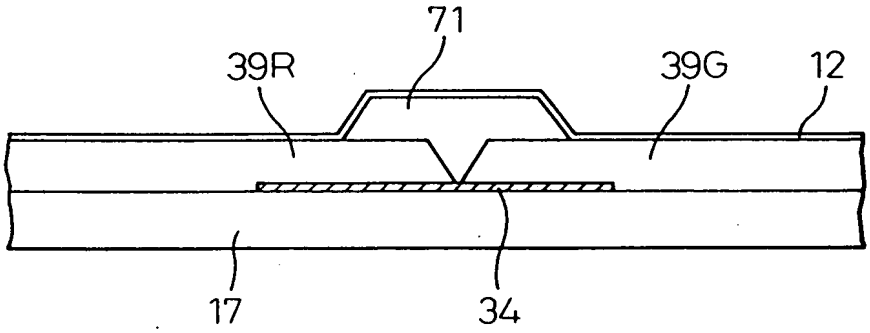


Fig.177B



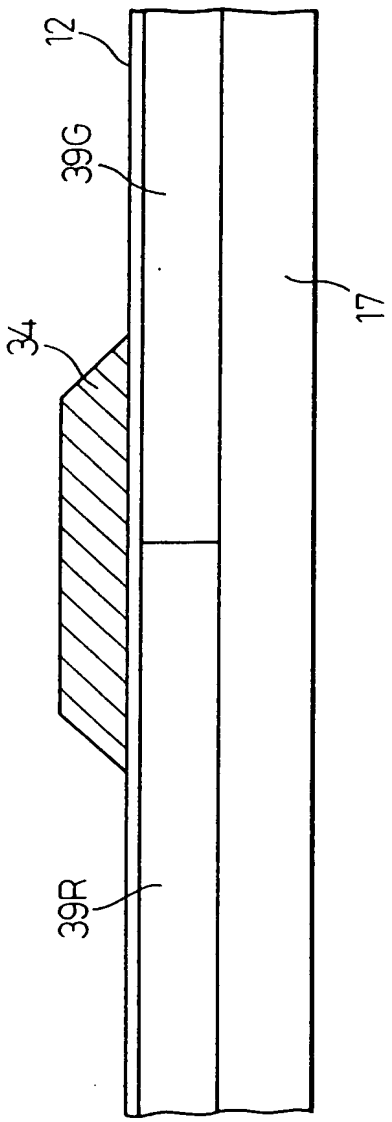


Fig.178

Fig.179A

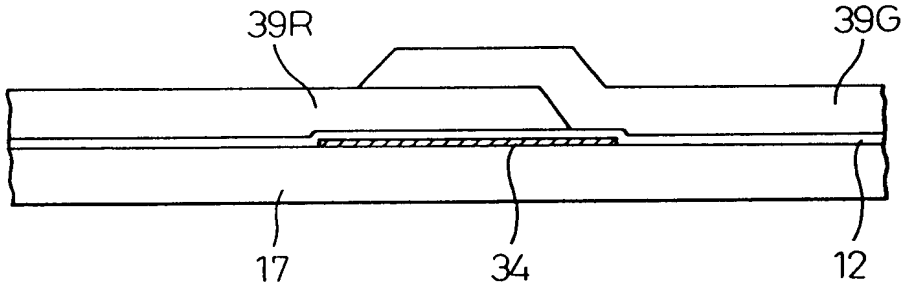


Fig.179B

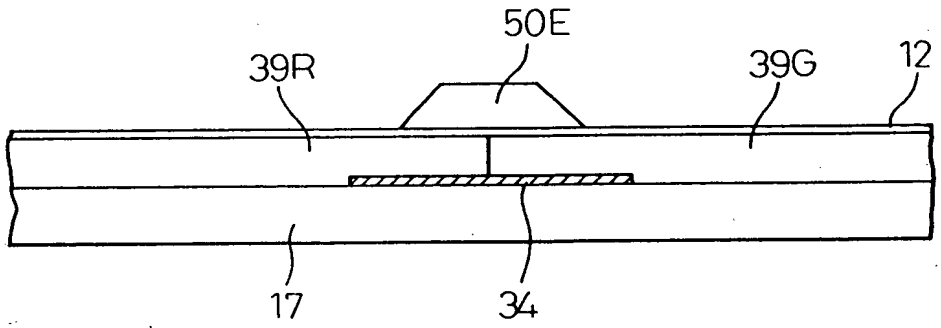


Fig.180A

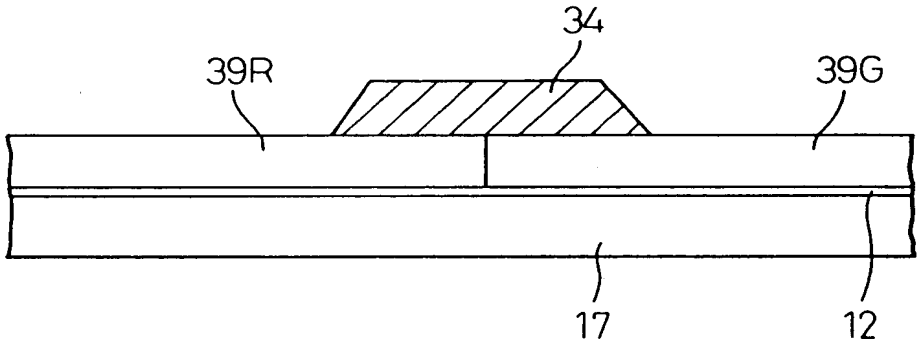


Fig.180B

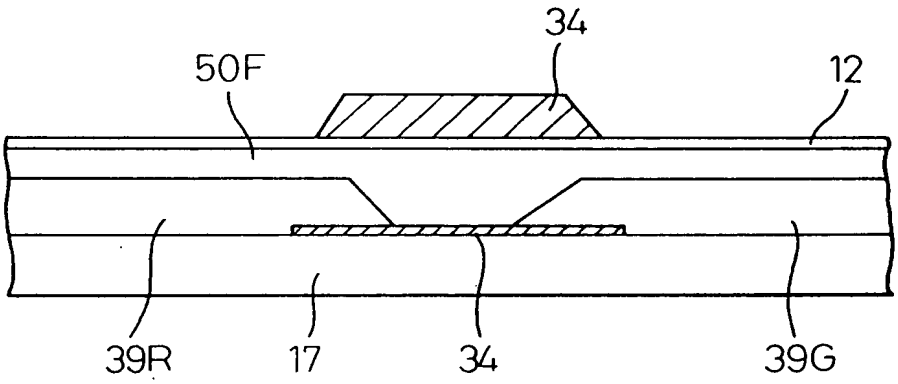


Fig.181A

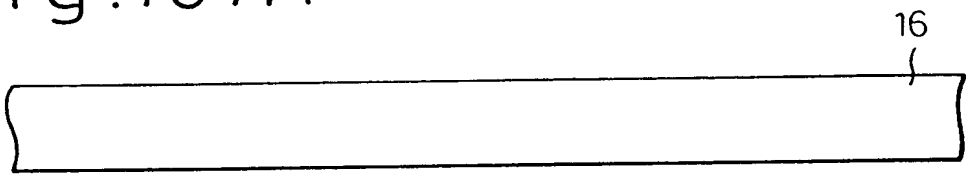


Fig.181B

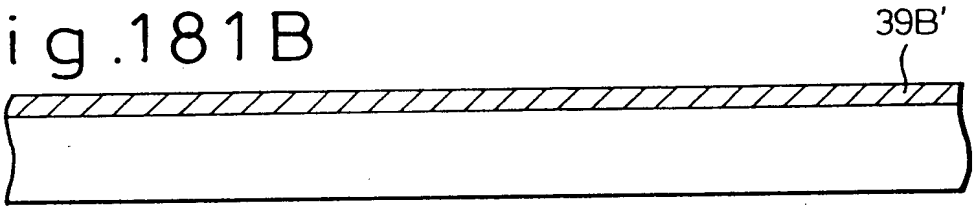


Fig.181C

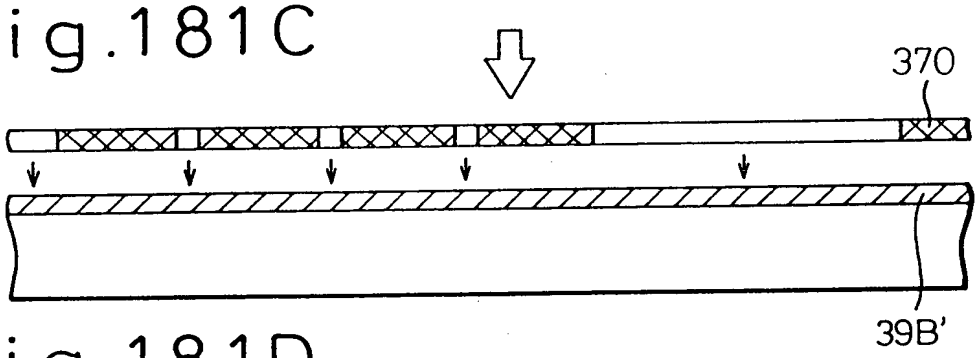


Fig.181D

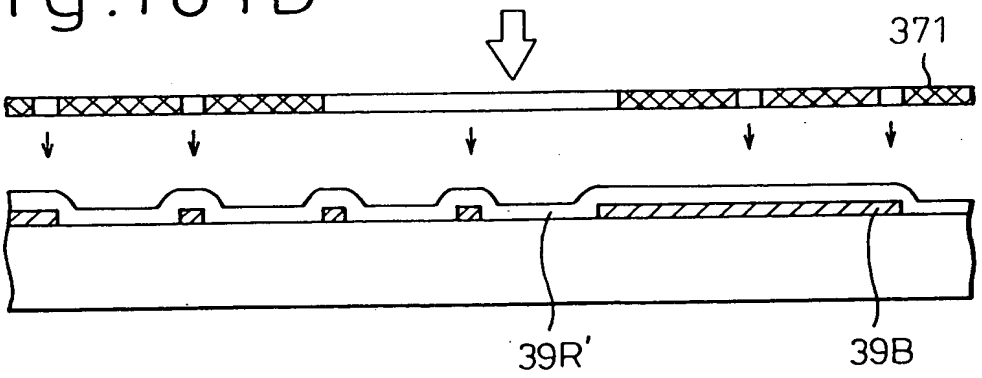


Fig.181E

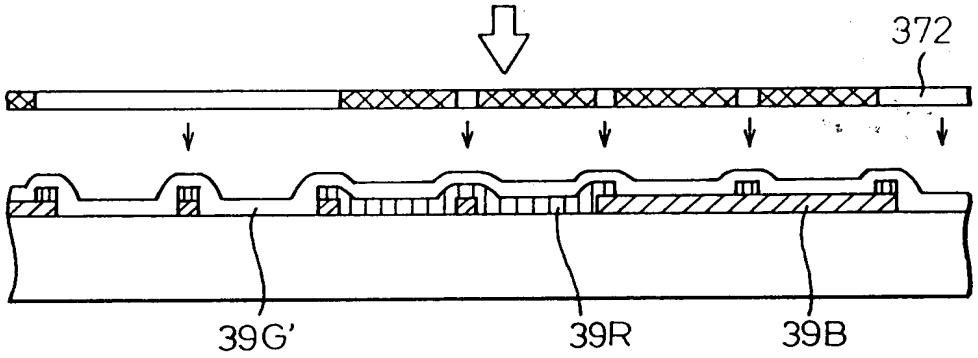


Fig.181F

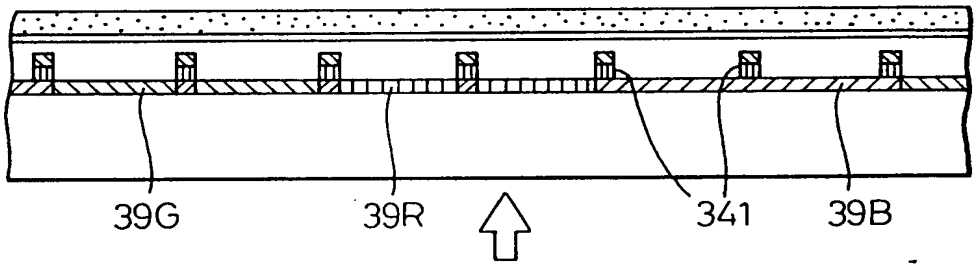


Fig.181G

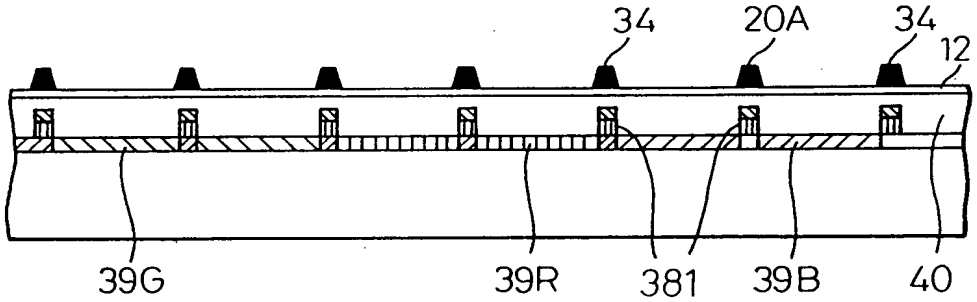


Fig.182

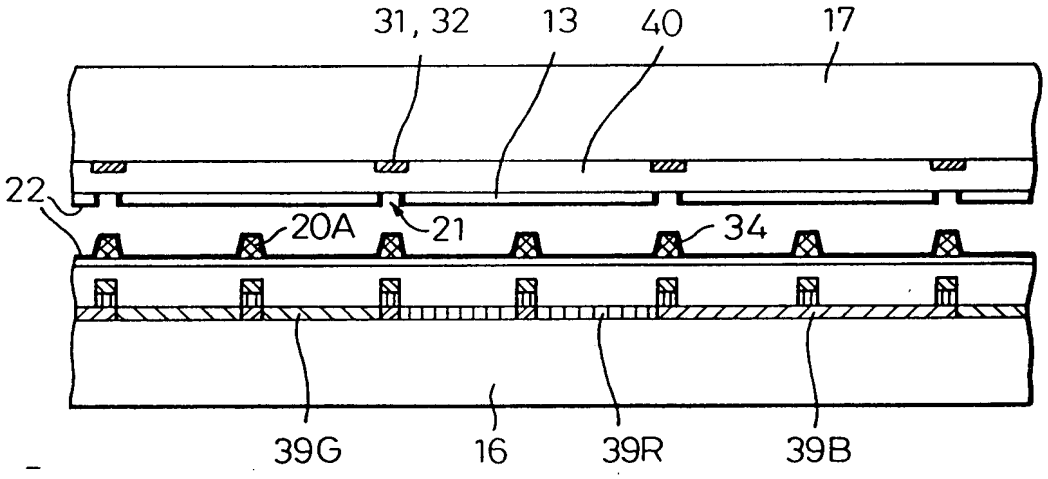


Fig.183A

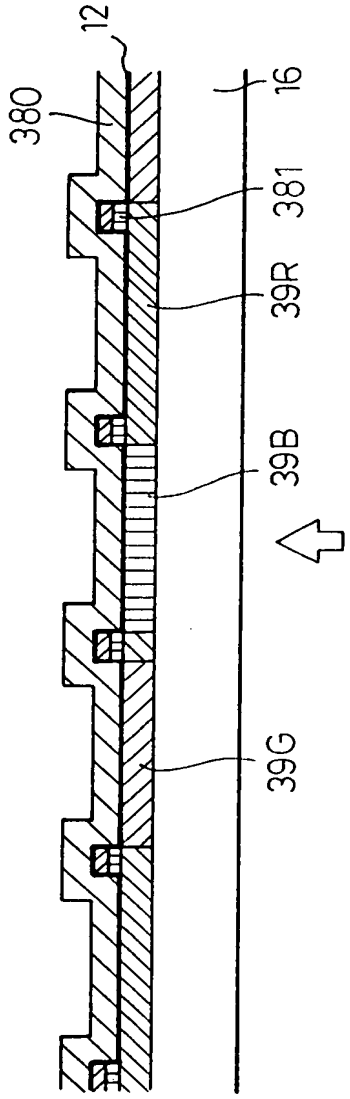
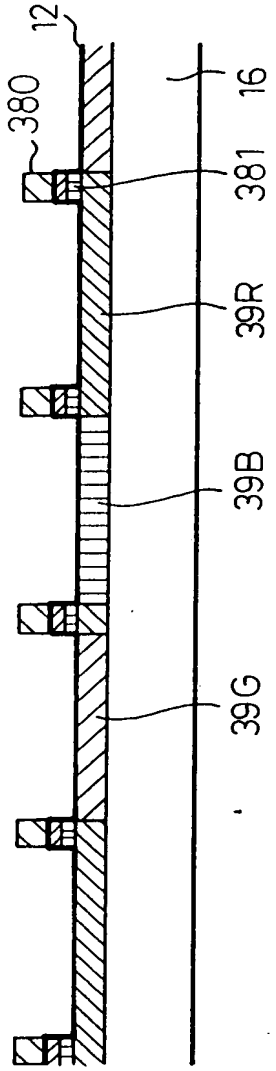


Fig.183B



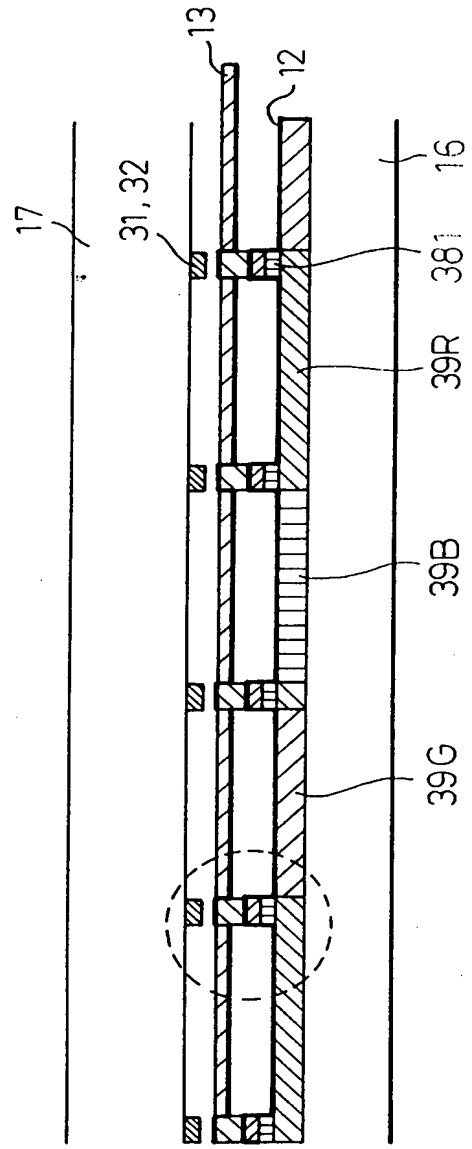


Fig.184A

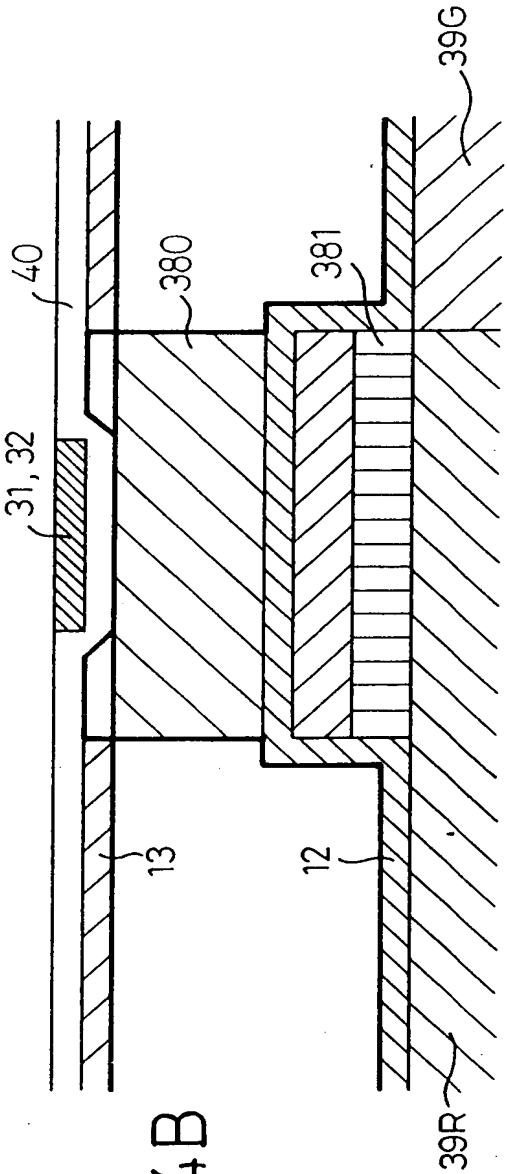


Fig.184B

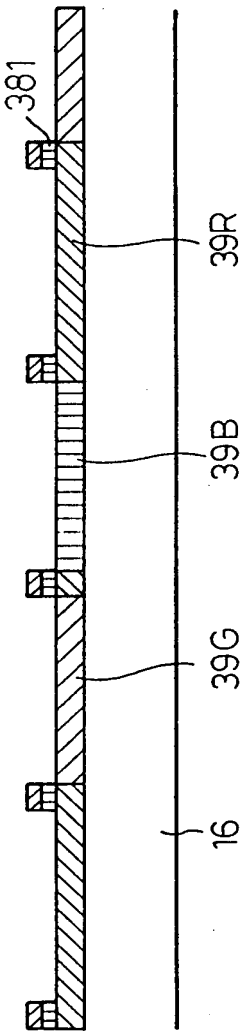


Fig.185A

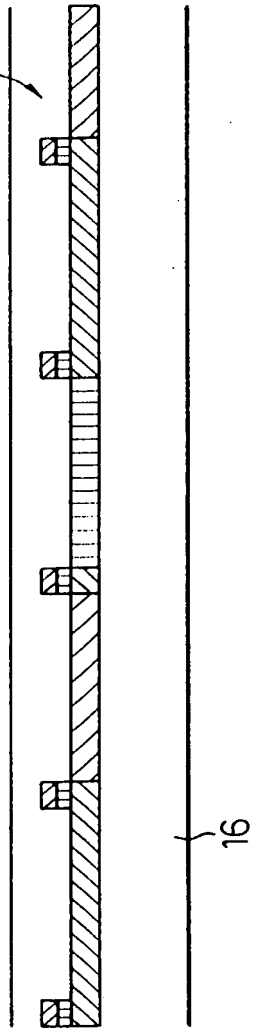


Fig.185B

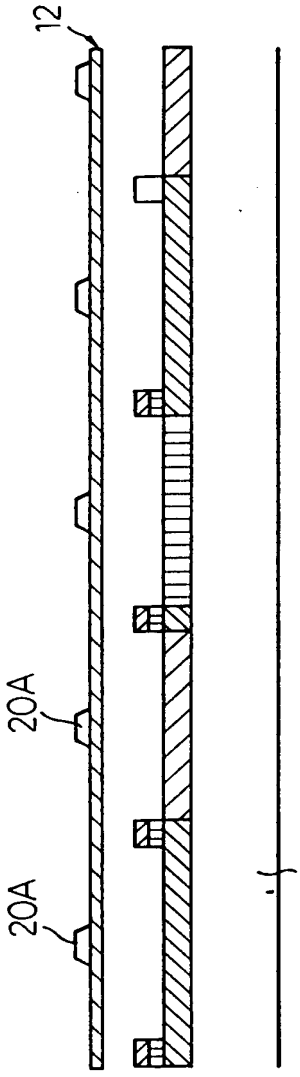


Fig.185C

Fig.186

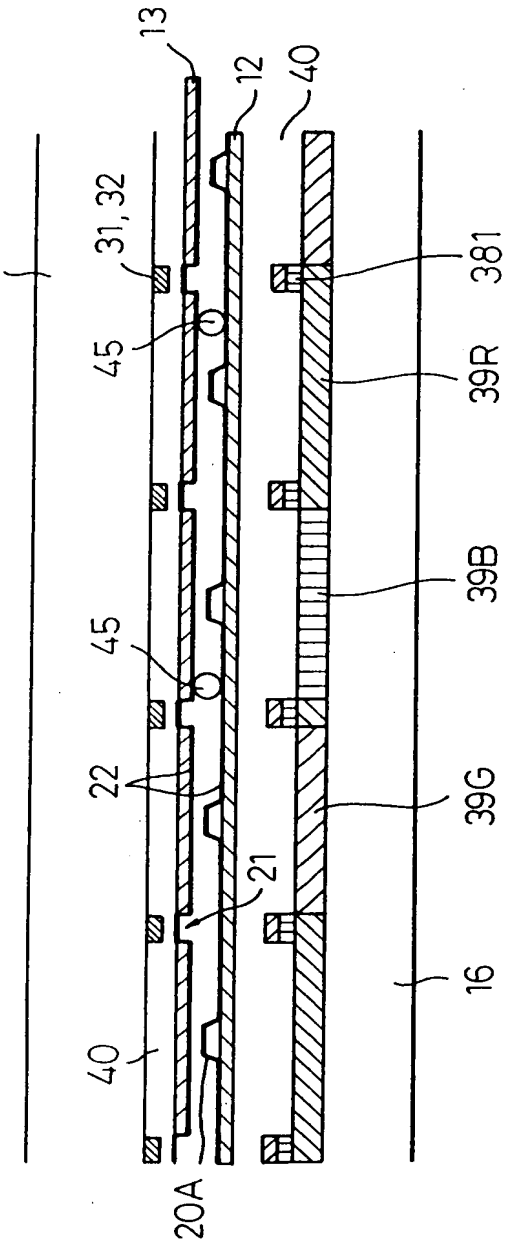
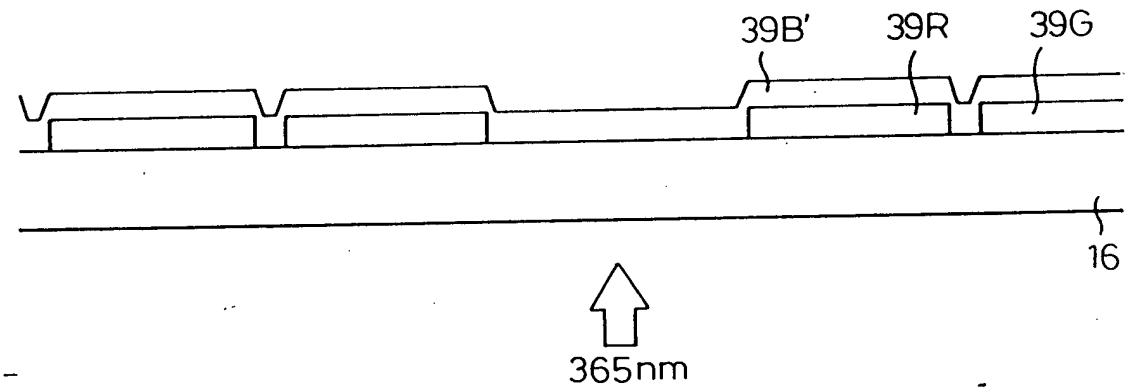


Fig.187



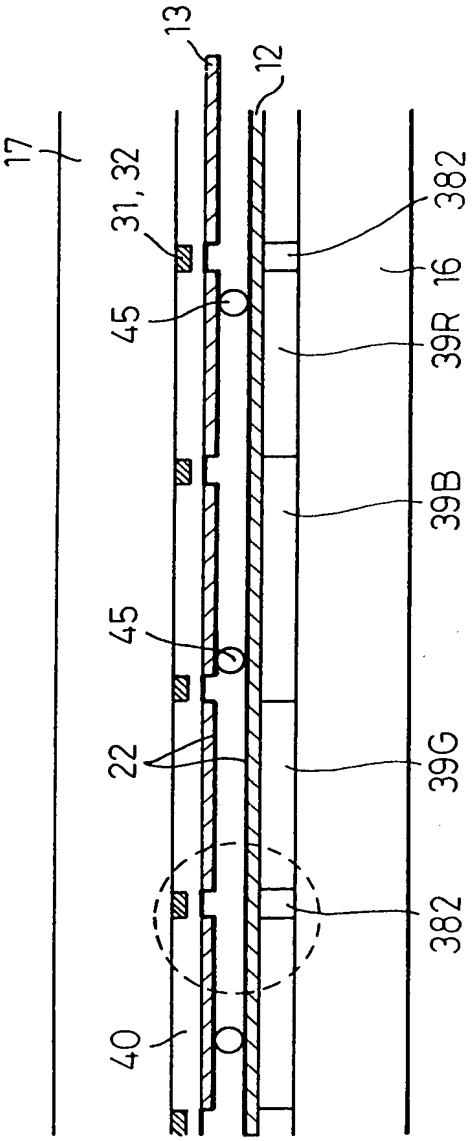


Fig.188A

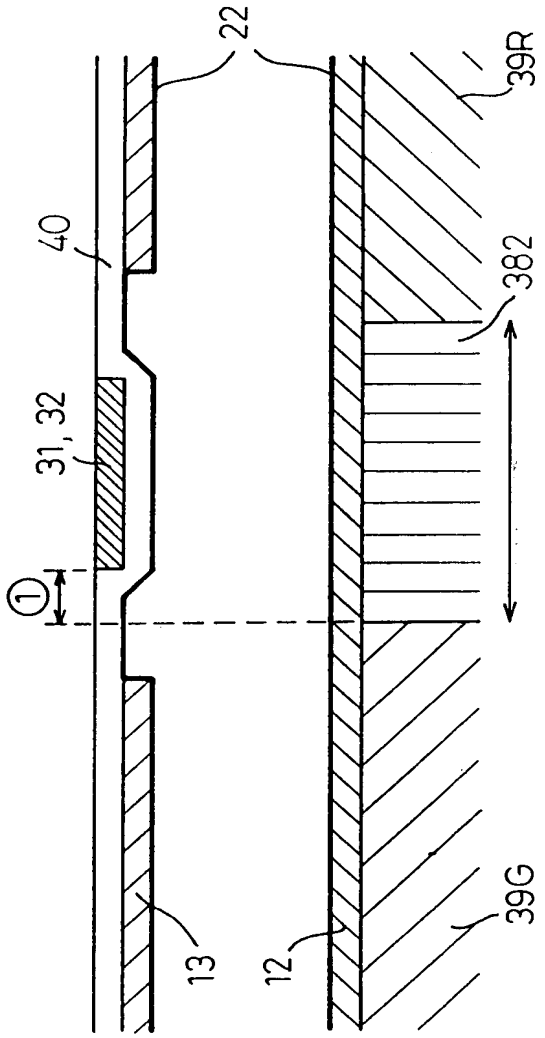


Fig.188B

Fig.189

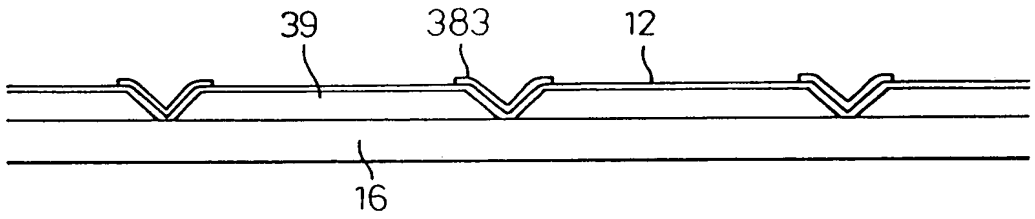


Fig.190A

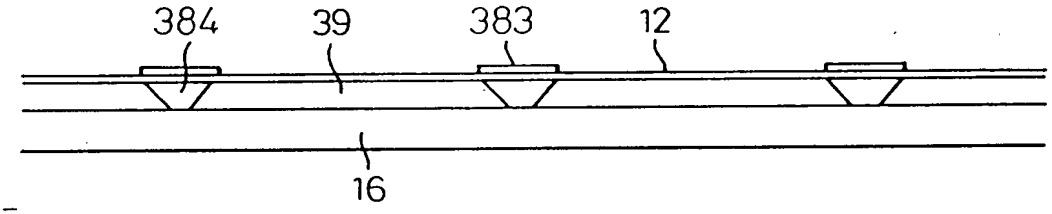


Fig.190B

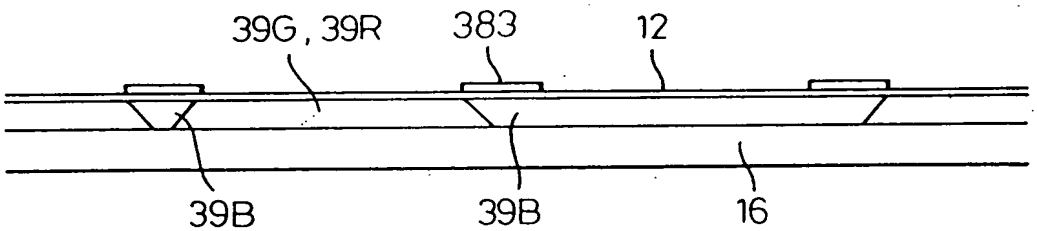


Fig.191

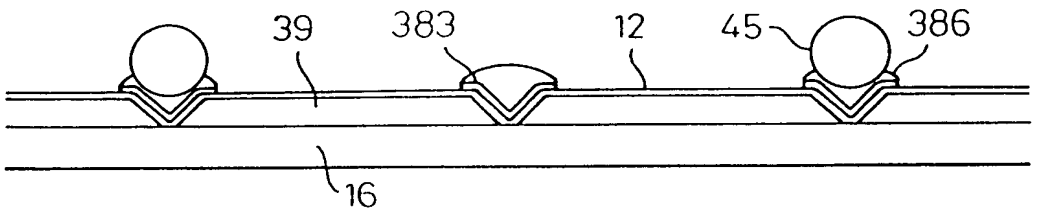


Fig.192

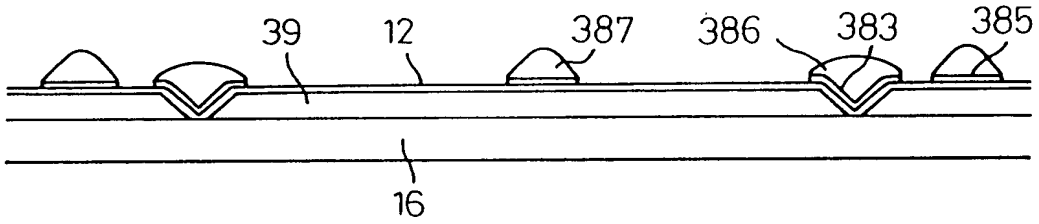


Fig.193

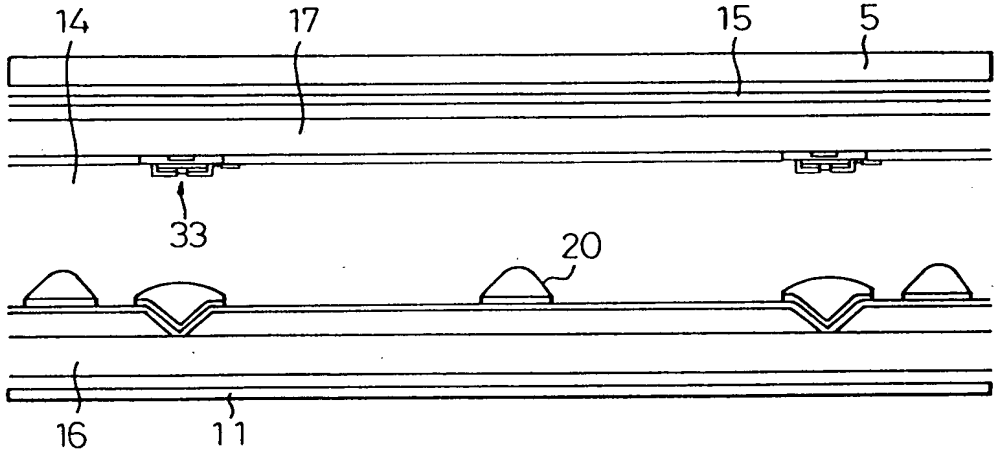


Fig.194

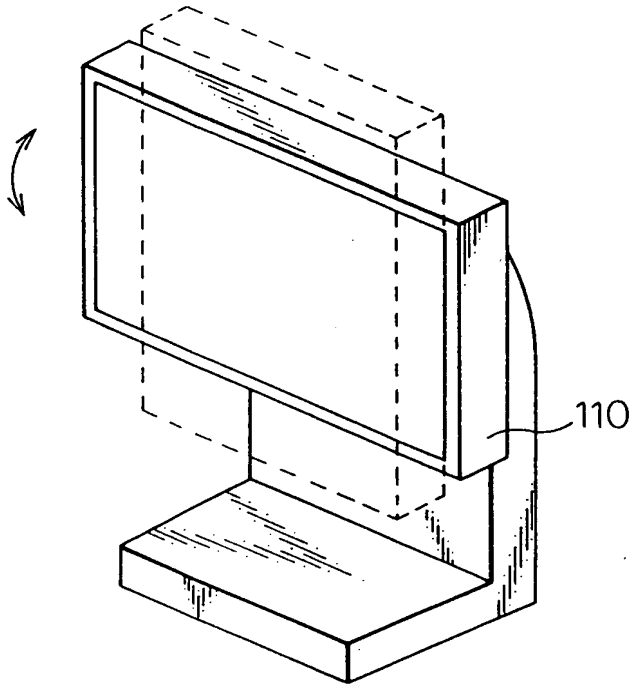


Fig.195

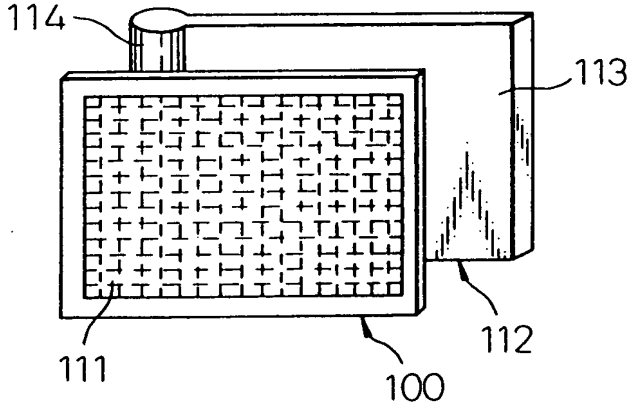


Fig.196A

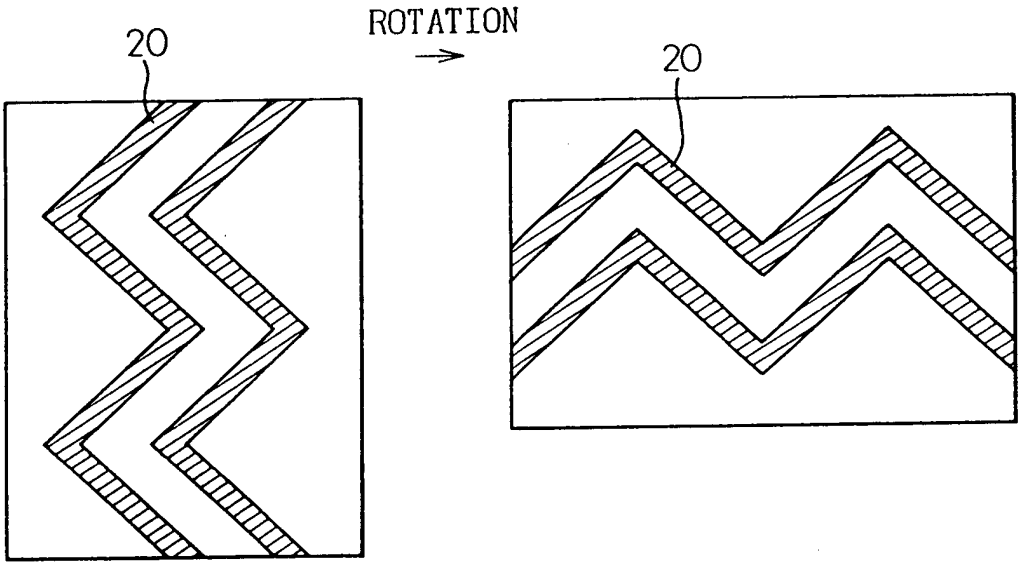


Fig.196B

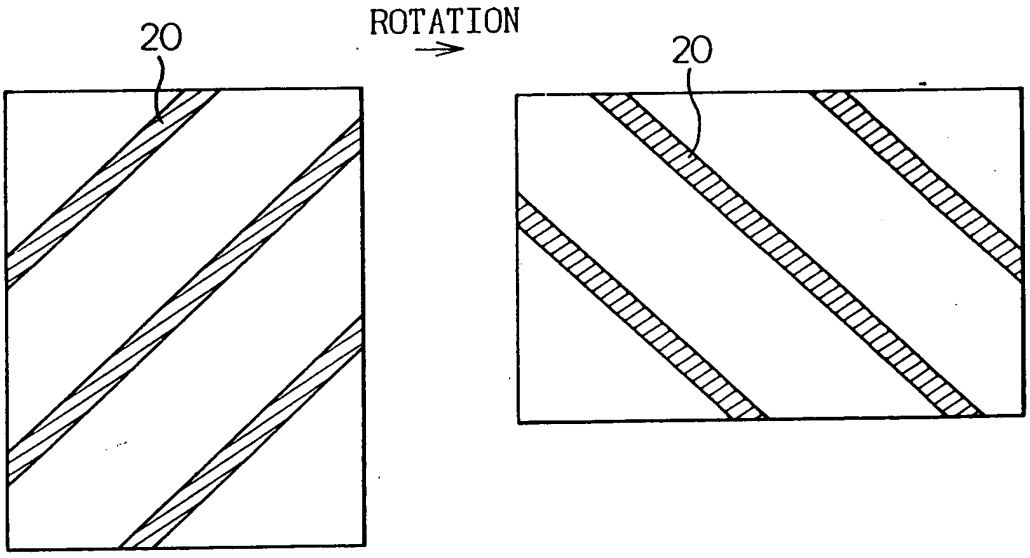


Fig.197

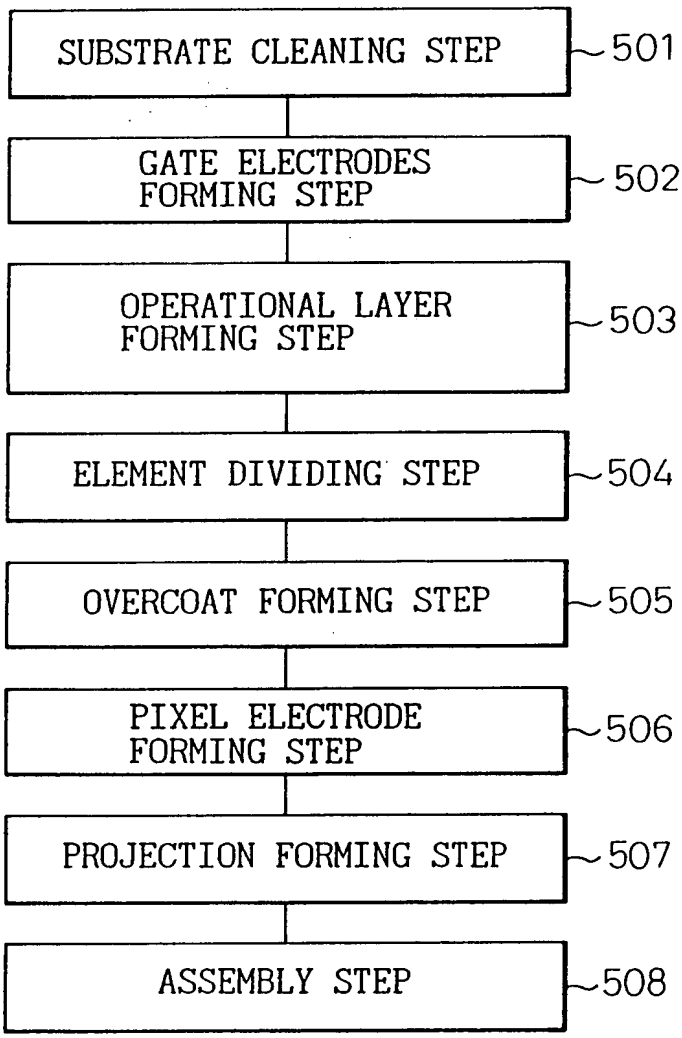

SUBSTRATE CLEANING STEP
501
GATE ELECTRODES FORMING STEP
502
OPERATIONAL LAYER FORMING STEP
503
ELEMENT DIVIDING STEP
504
OVERCOAT FORMING STEP
505
PIXEL ELECTRODE FORMING STEP
506
PROJECTION FORMING STEP
507
ASSEMBLY STEP
508

Fig.198

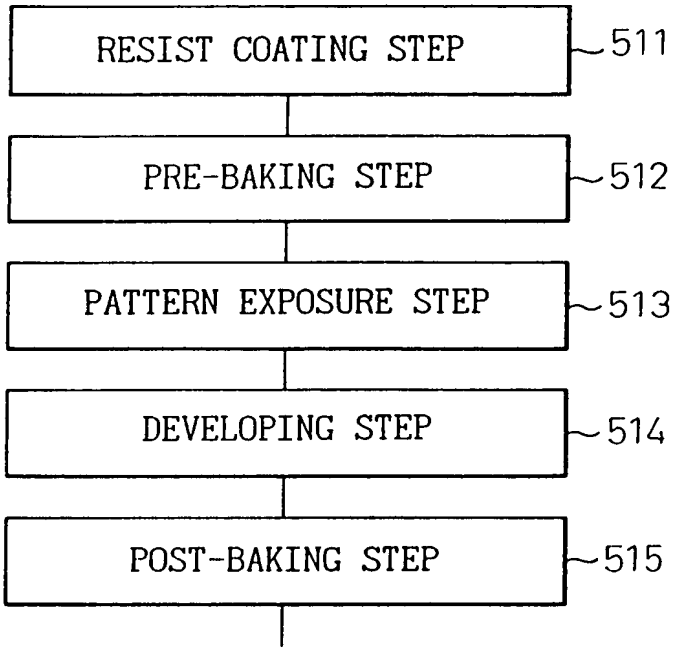


Fig.199

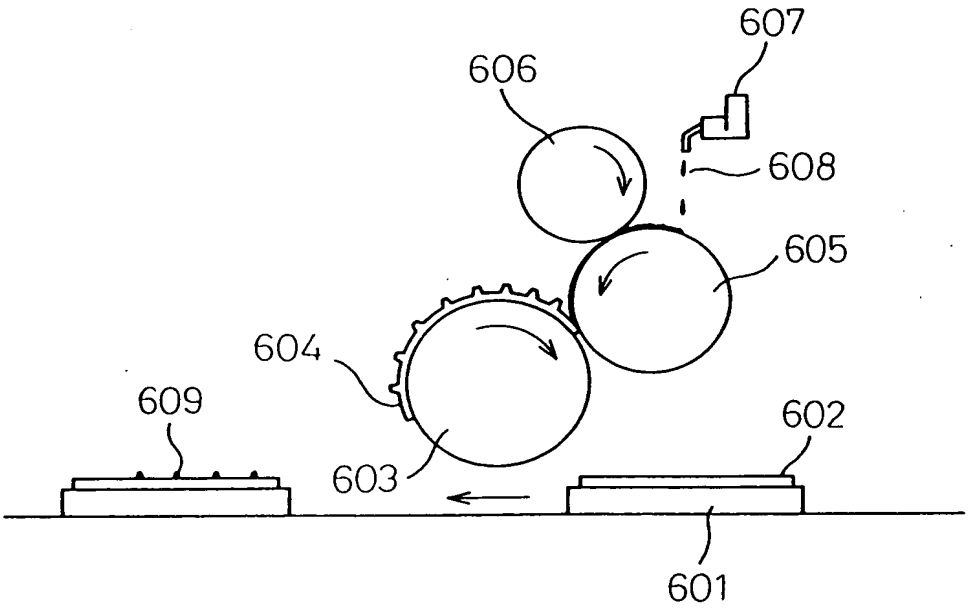


Fig. 200

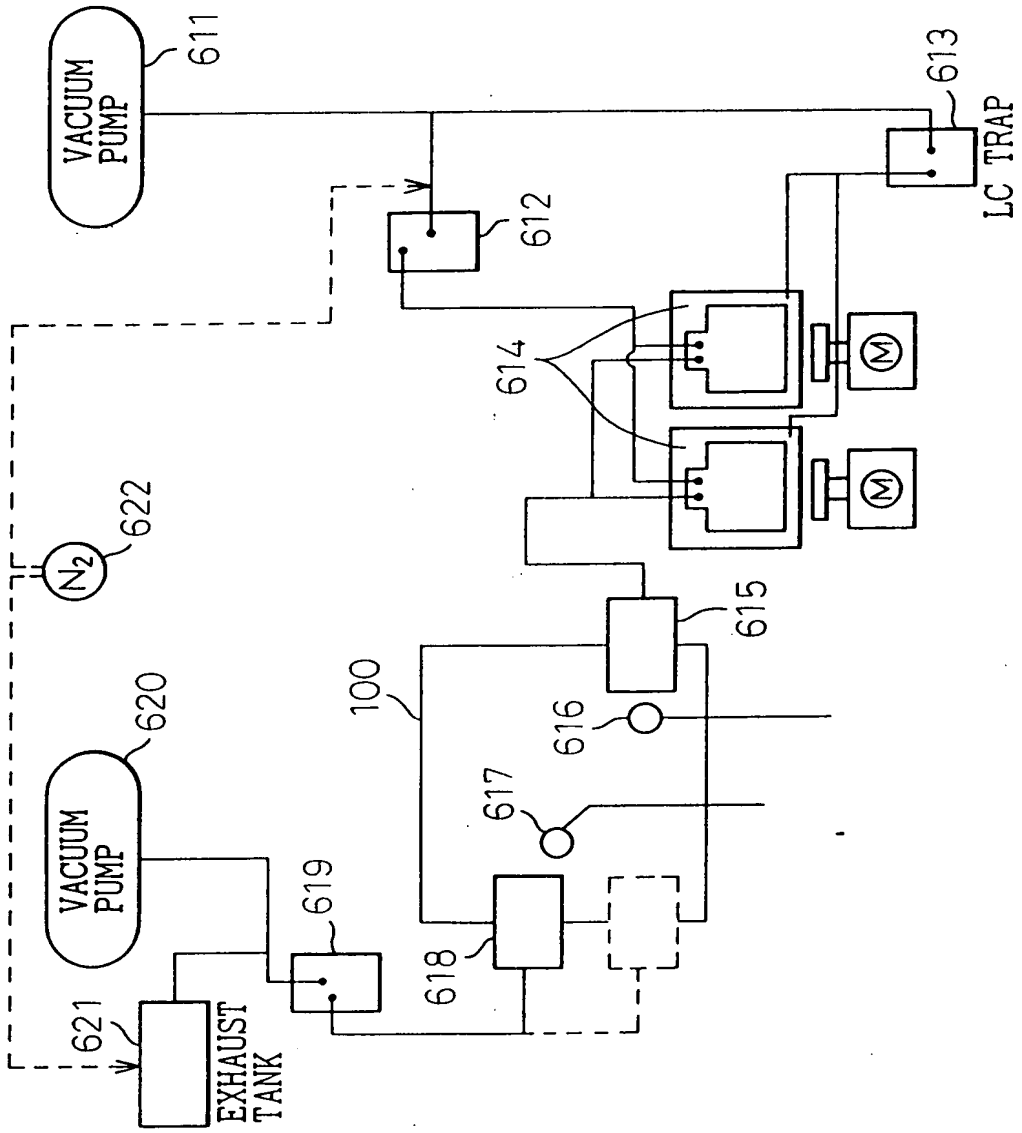

VACUUM PUMP
611
613
LC TRAP
612
614
M
M
615
616
617
618
619
100
VACUUM PUMP
620
N_2
622
621
EXHAUST TANK

Fig. 201A

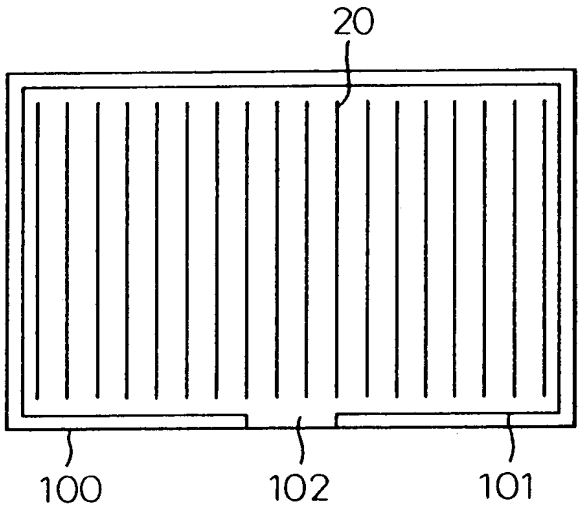


Fig. 201B

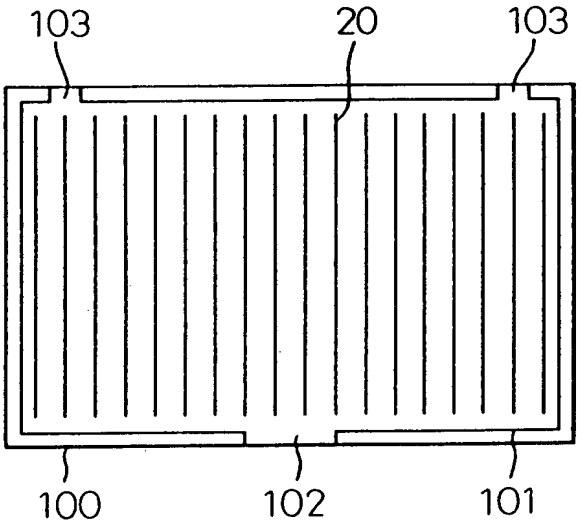


Fig. 202A

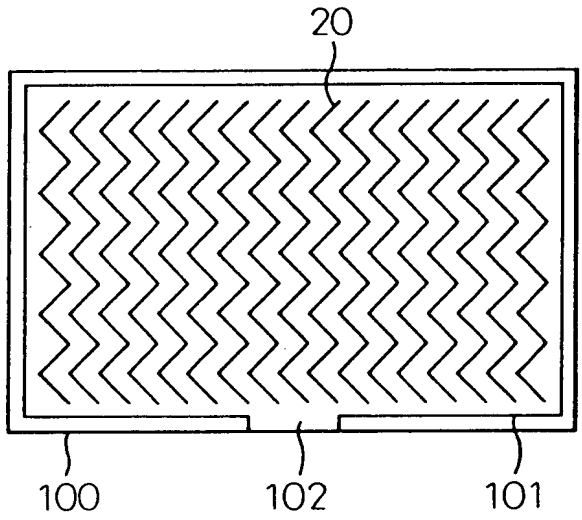


Fig. 202B

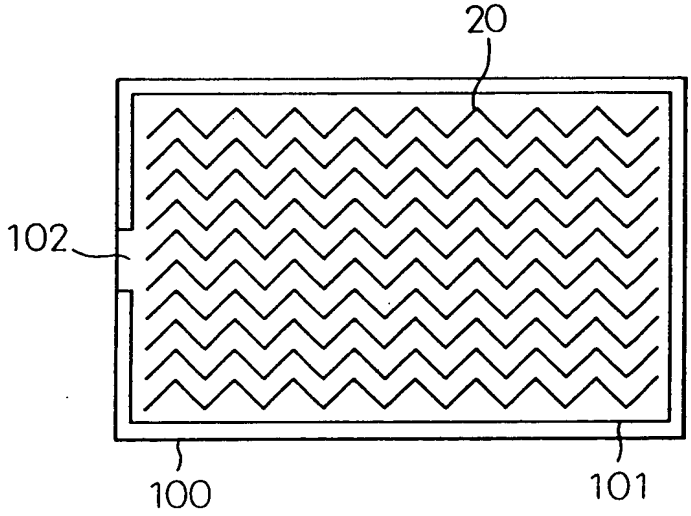


Fig. 203A

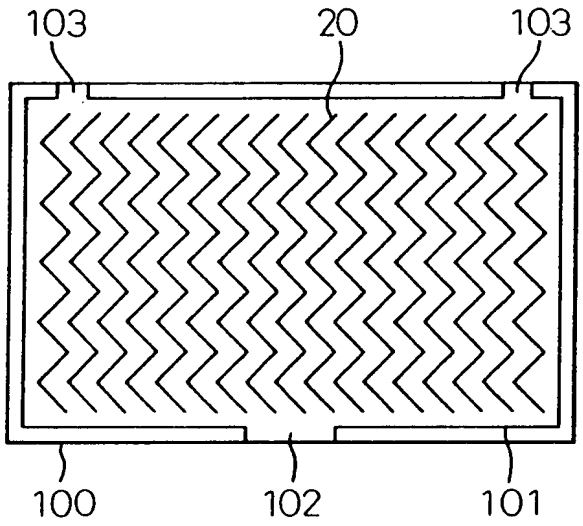


Fig. 203B

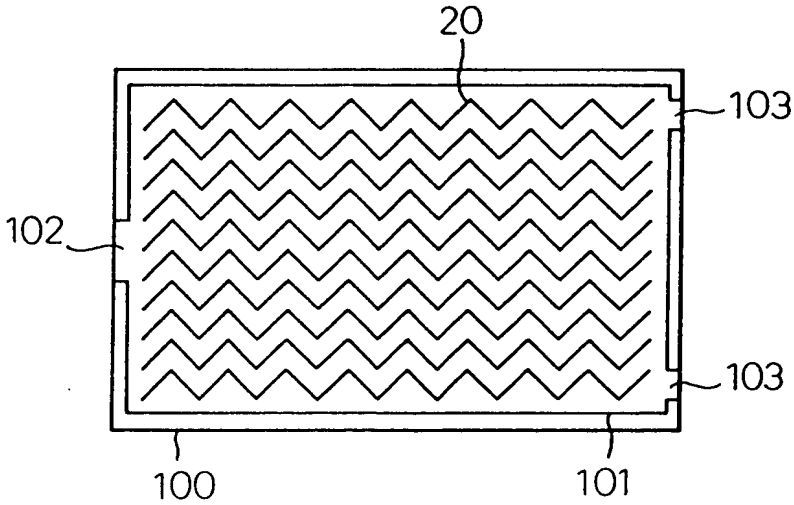


Fig. 204

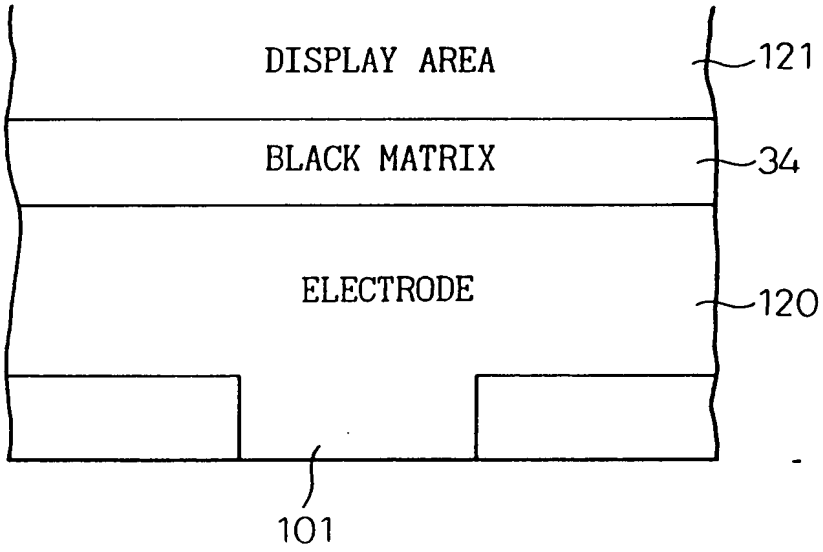


Fig. 205A

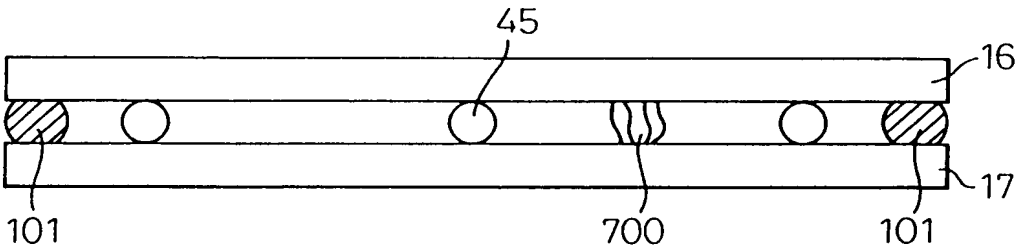


Fig. 205B

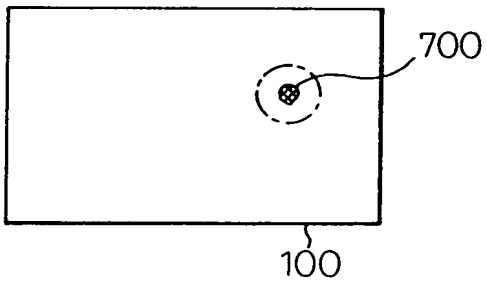


Fig. 205C

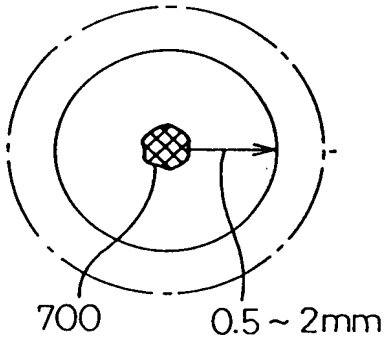


Fig.206

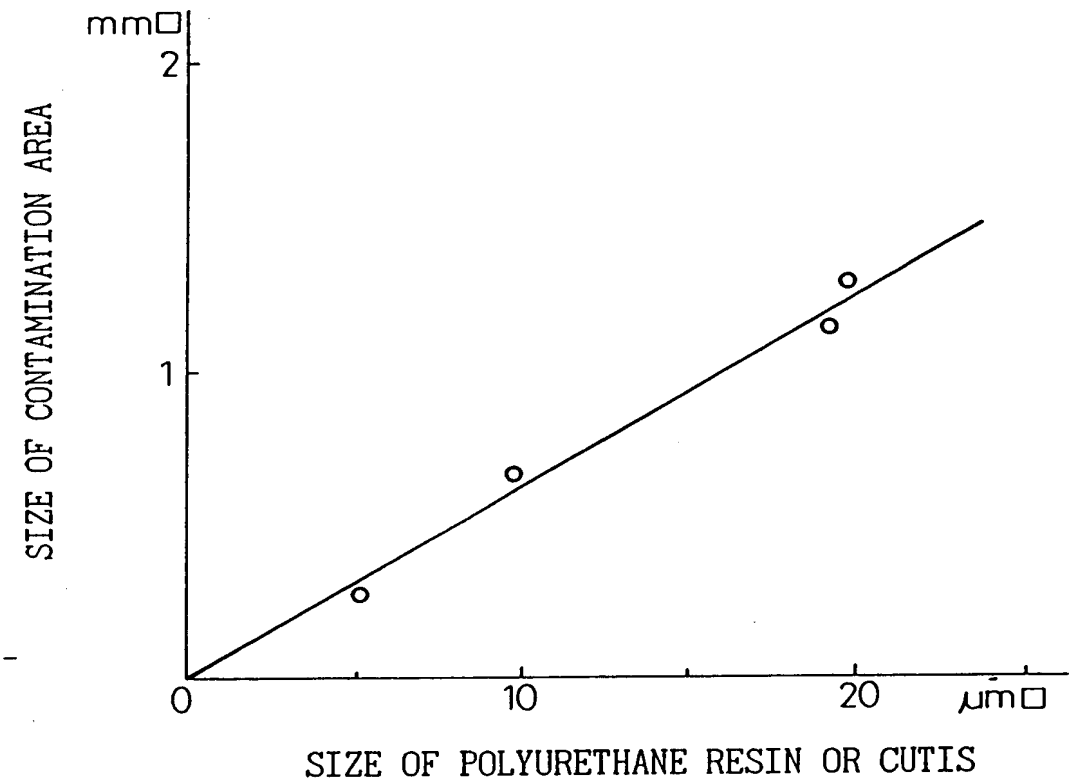

mm□
2
1
0
10
20
μm□
SIZE OF CONTAMINATION AREA
SIZE OF POLYURETHANE RESIN OR CUTIS

Fig.207

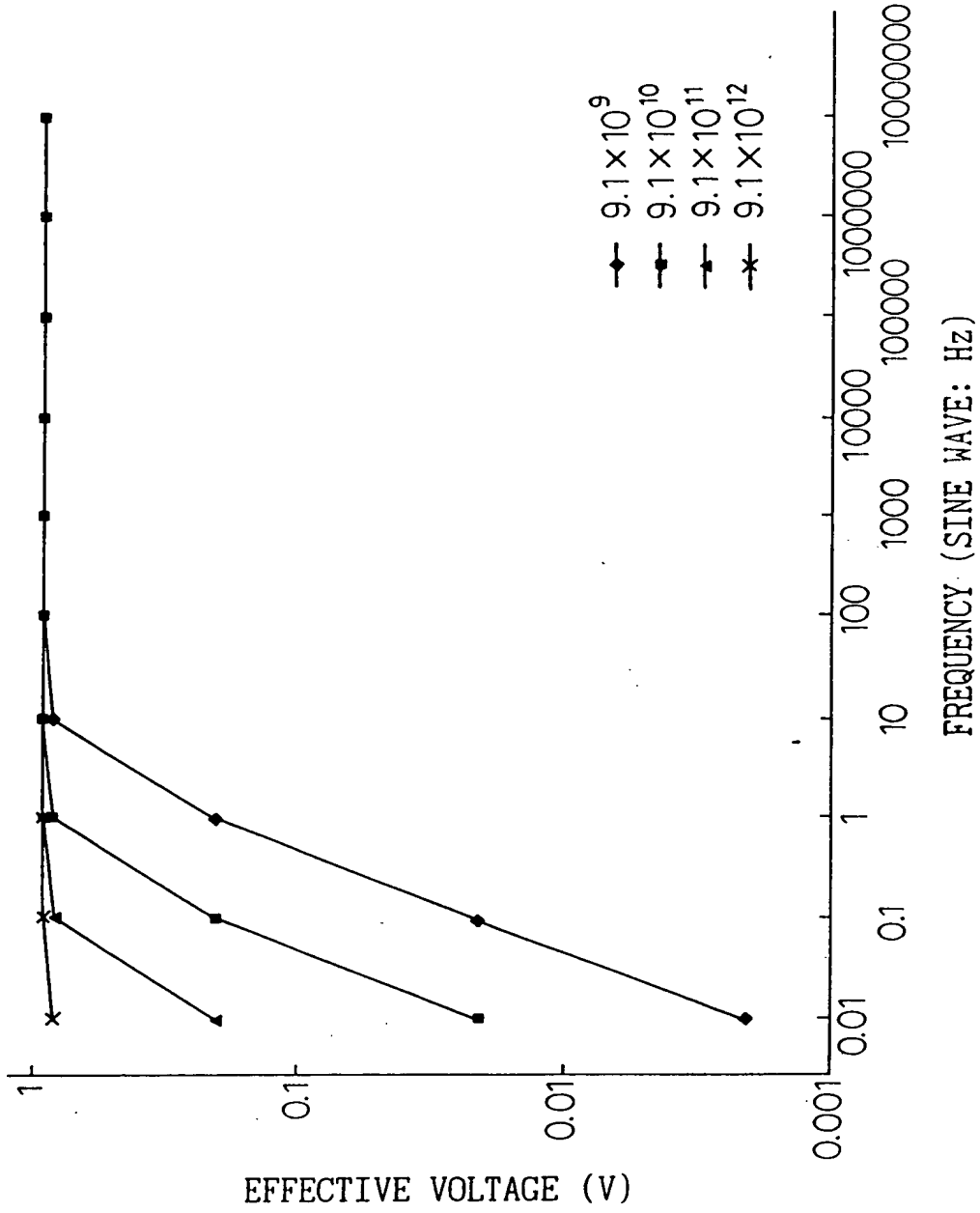

9.1×10^9
9.1×10^10
9.1×10^11
9.1×10^12
1
0.1
0.01
0.001
0.01
0.1
1
10
100
1000
10000
100000
1000000
10000000
EFFECTIVE VOLTAGE (V)
FREQUENCY (SINE WAVE: Hz)

Fig.208

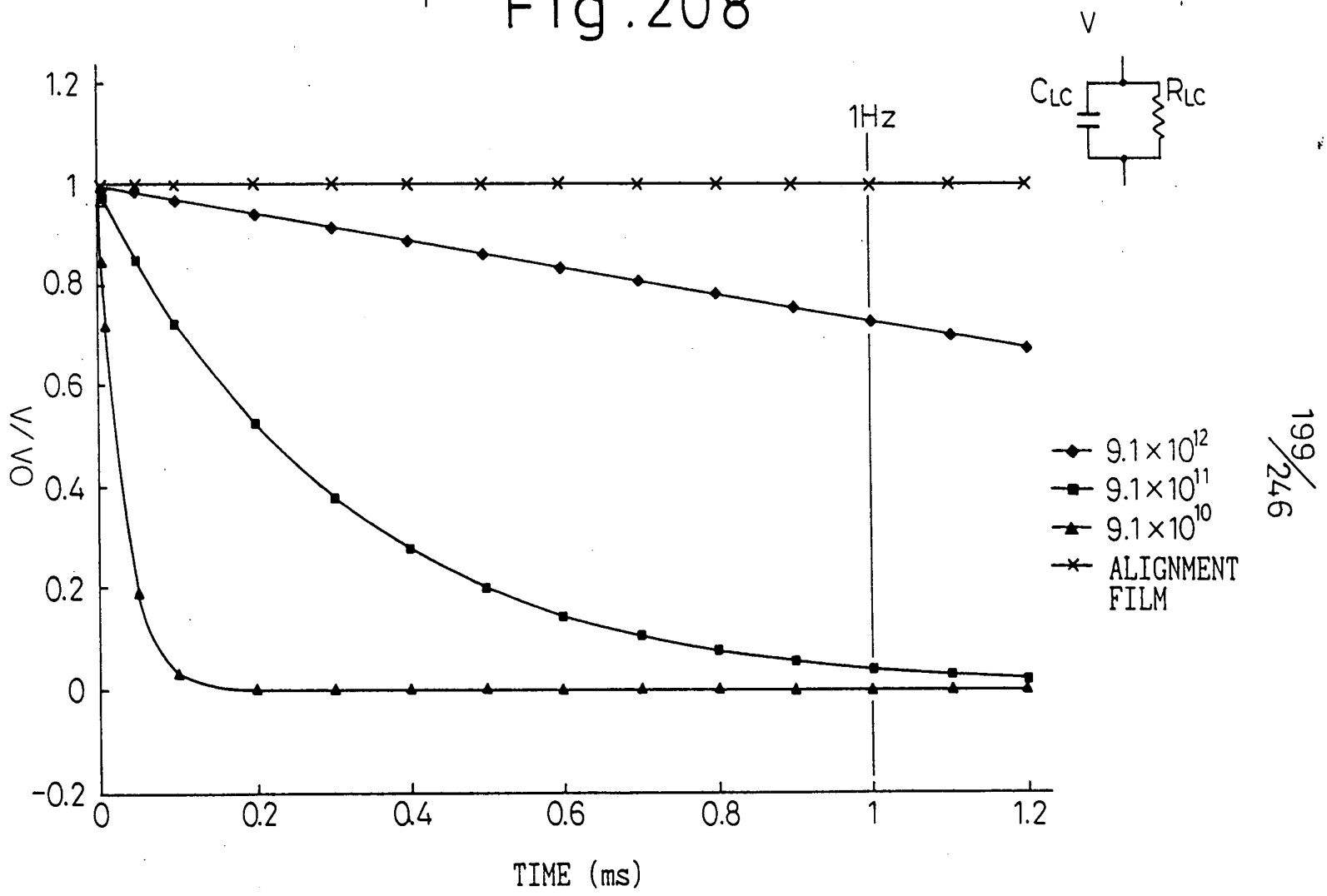

V
CLC
RLC
1Hz
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
V/V0
0
0.2
0.4
0.6
0.8
1
1.2
TIME (ms)
9.1×10^12
9.1×10^11
9.1×10^10
ALIGNMENT FILM

Fig.209

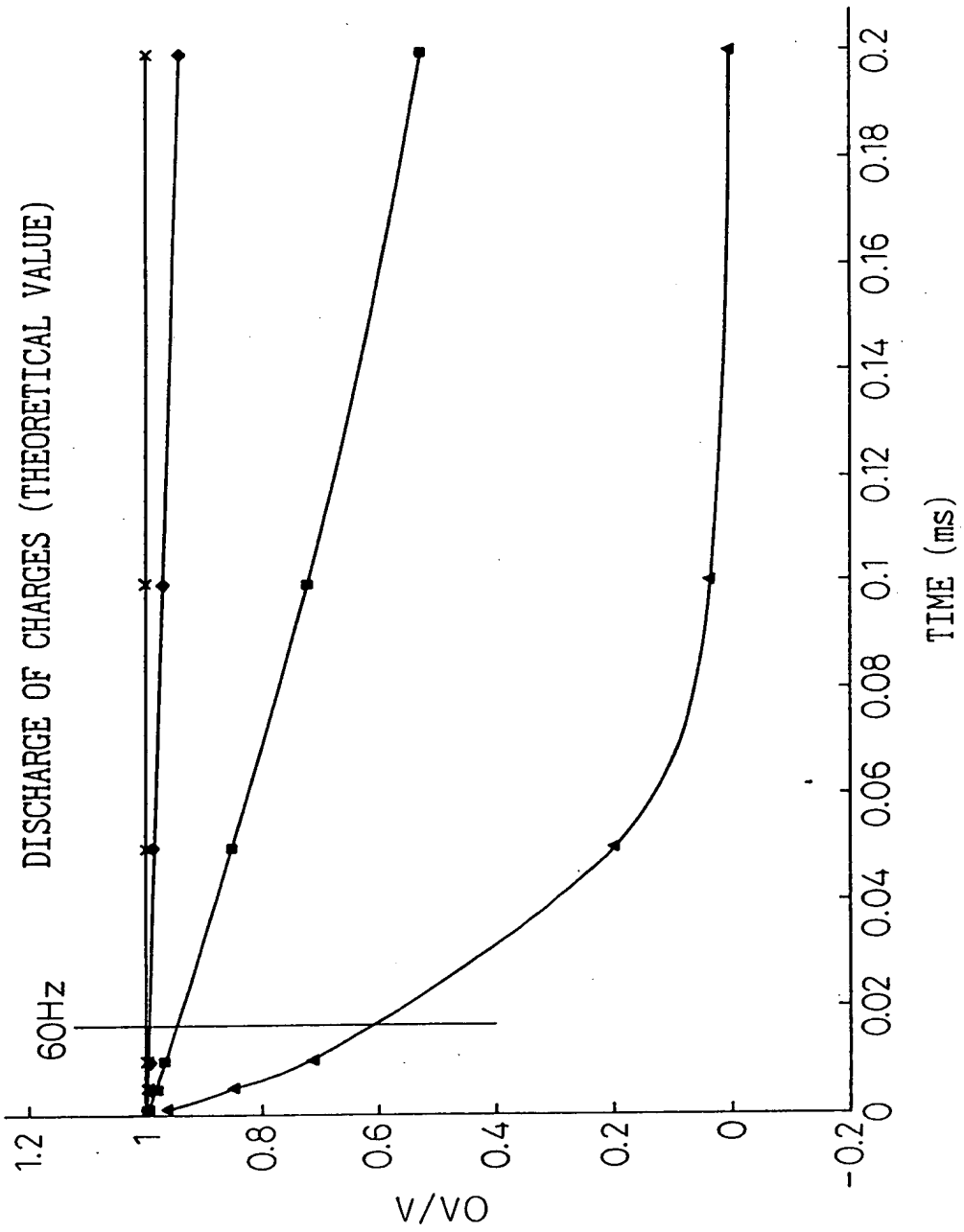

DISCHARGE OF CHARGES (THEORETICAL VALUE)
60Hz
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
V/VO
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
TIME (ms)

Fig.210

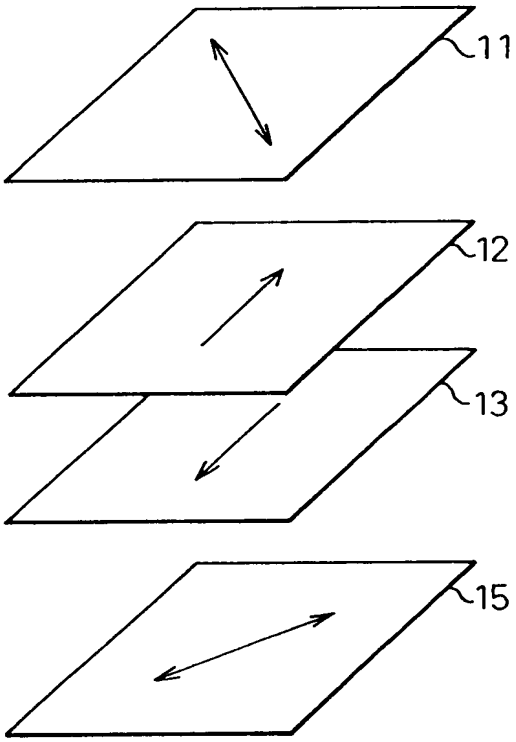


Fig.211

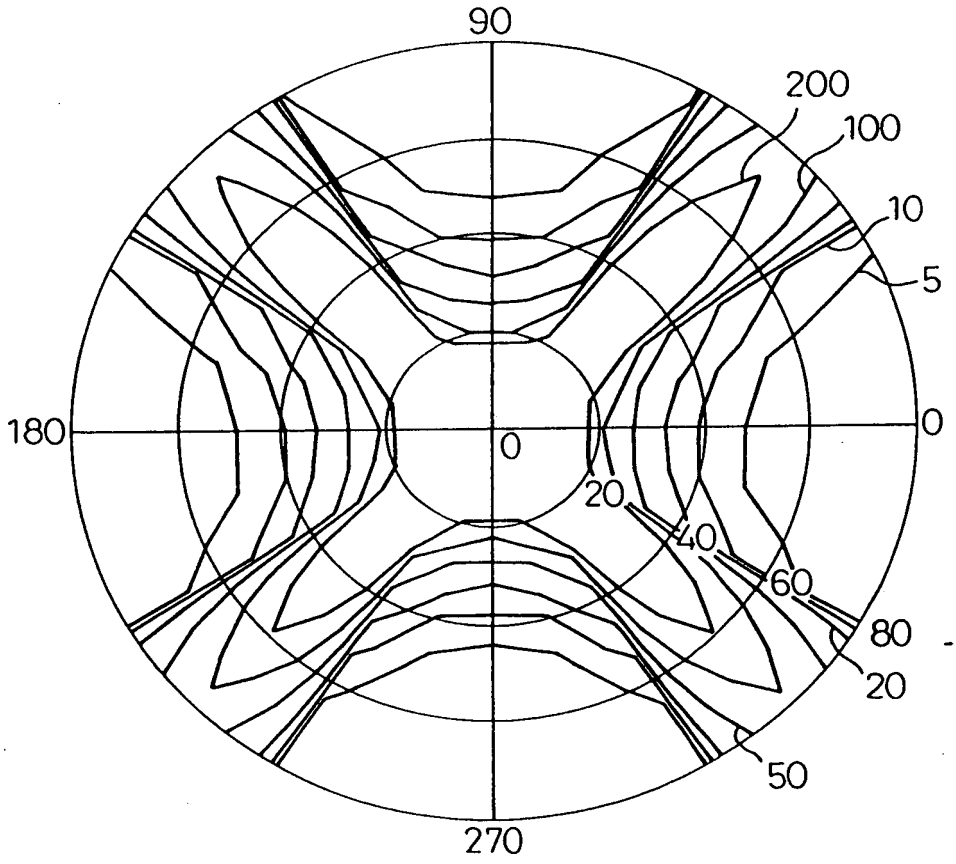


Fig.212

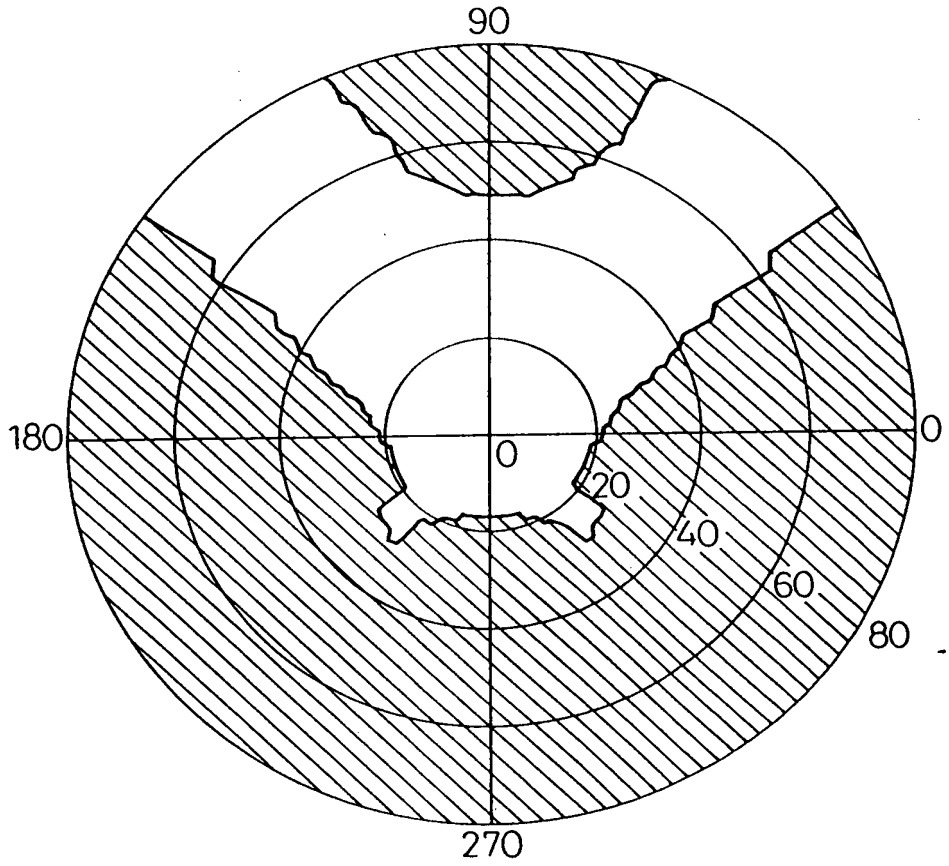


Fig.213

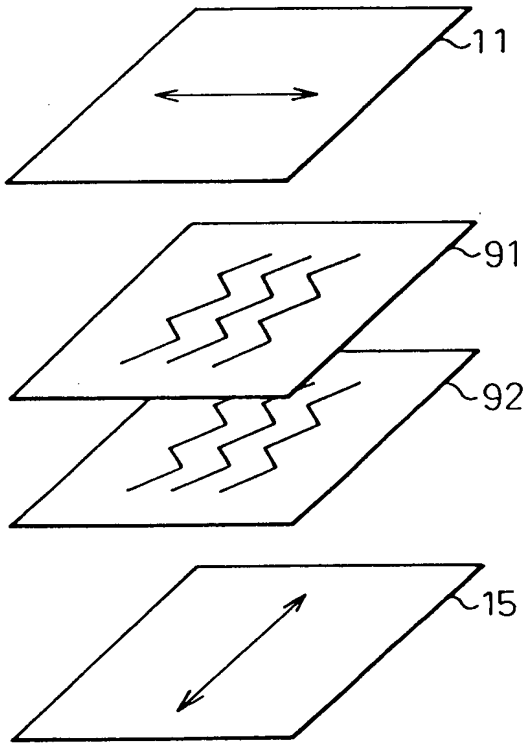


Fig. 214

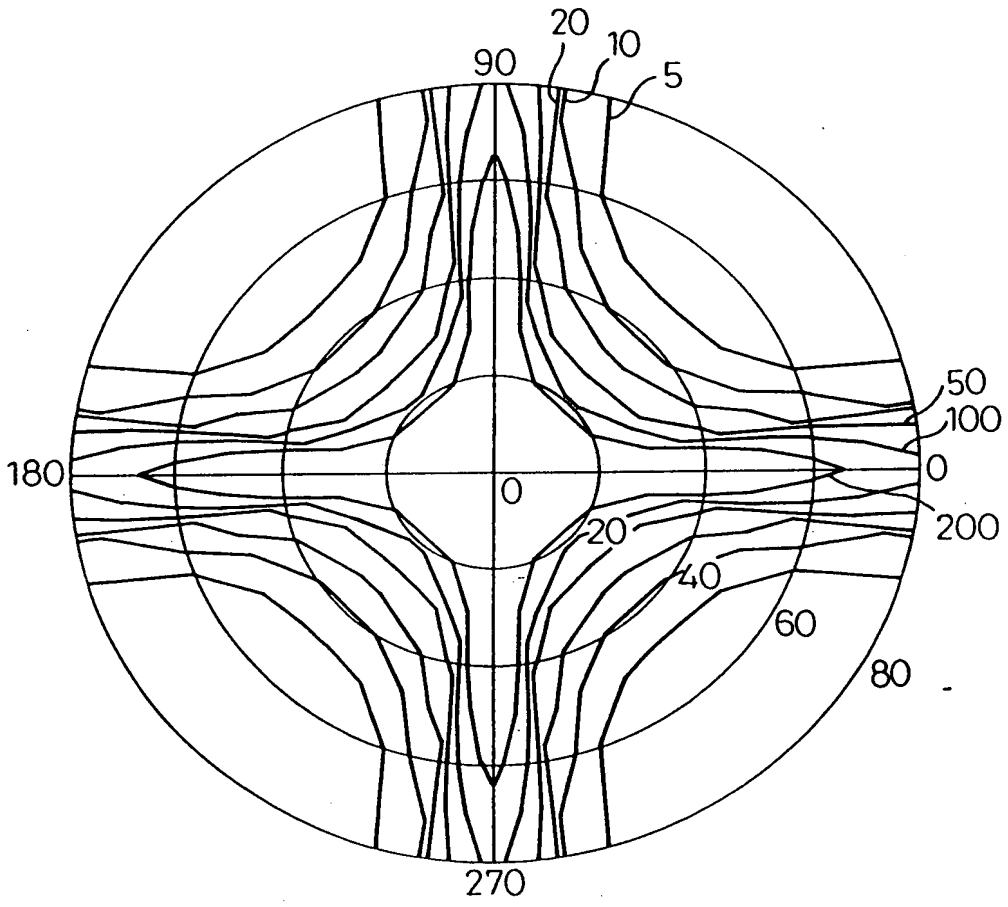


Fig.215

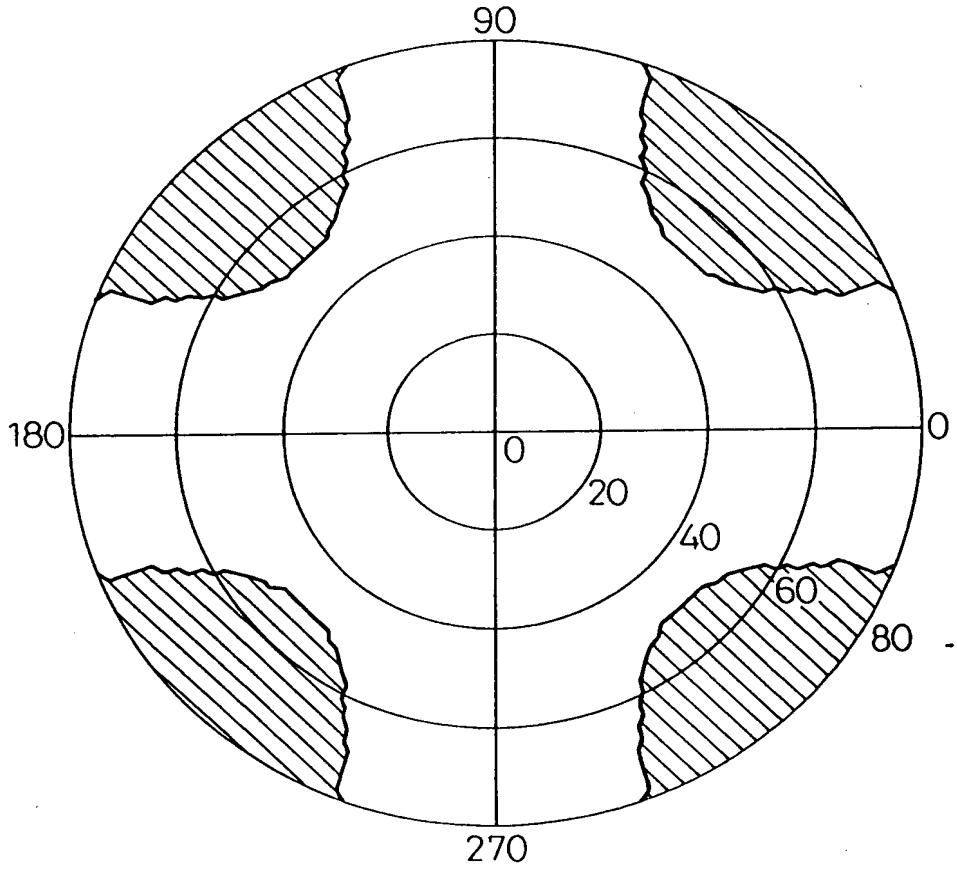
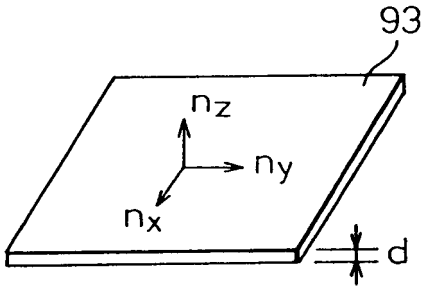


Fig.216



GENERAL CONDITION	$n_x, n_y \geq n_z$
POSITIVE UNIAXIAL FILM	$n_x > n_y = n_z$
NEGATIVE UNIAXIAL FILM	$n_x = n_y > n_z$
BIAXIAL FILM (A PHASE LAG AXIS IS X DIRECTION.)	$n_x > n_y > n_z$
RETARDATION IN INPLANE DIRECTIONS	$R = (n_x - n_y)d$
RETARDATION OF THICKNESS DIRECTION	$R = \left(\frac{n_x + n_y}{2} - n_z \right) d$

Fig. 217

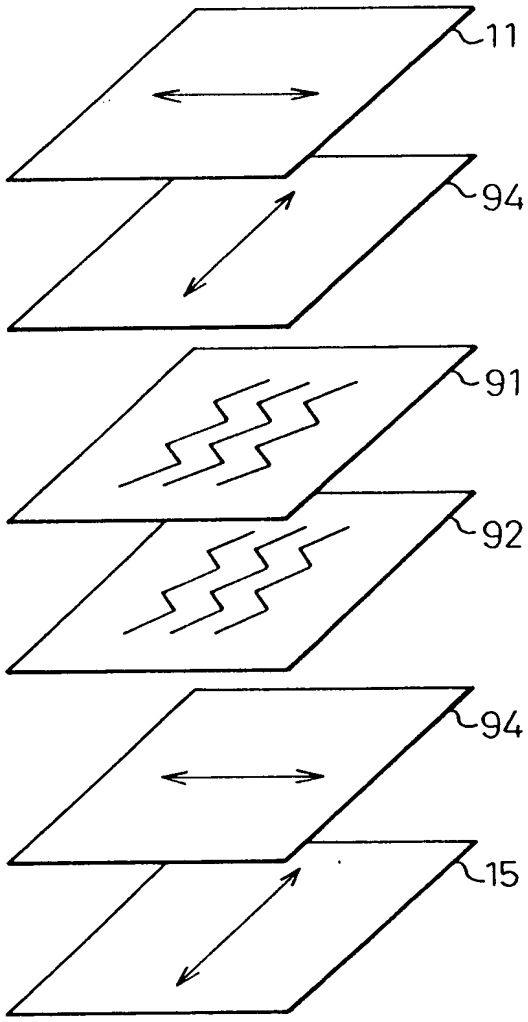


Fig.218

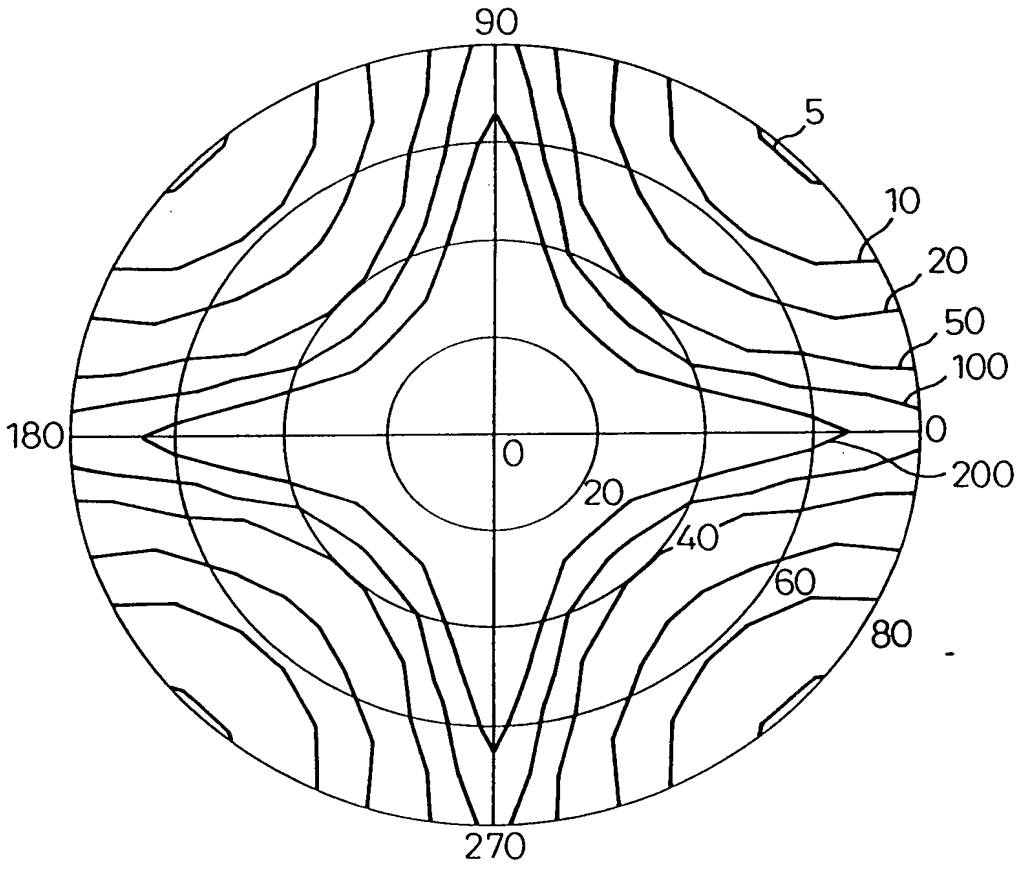


Fig.219

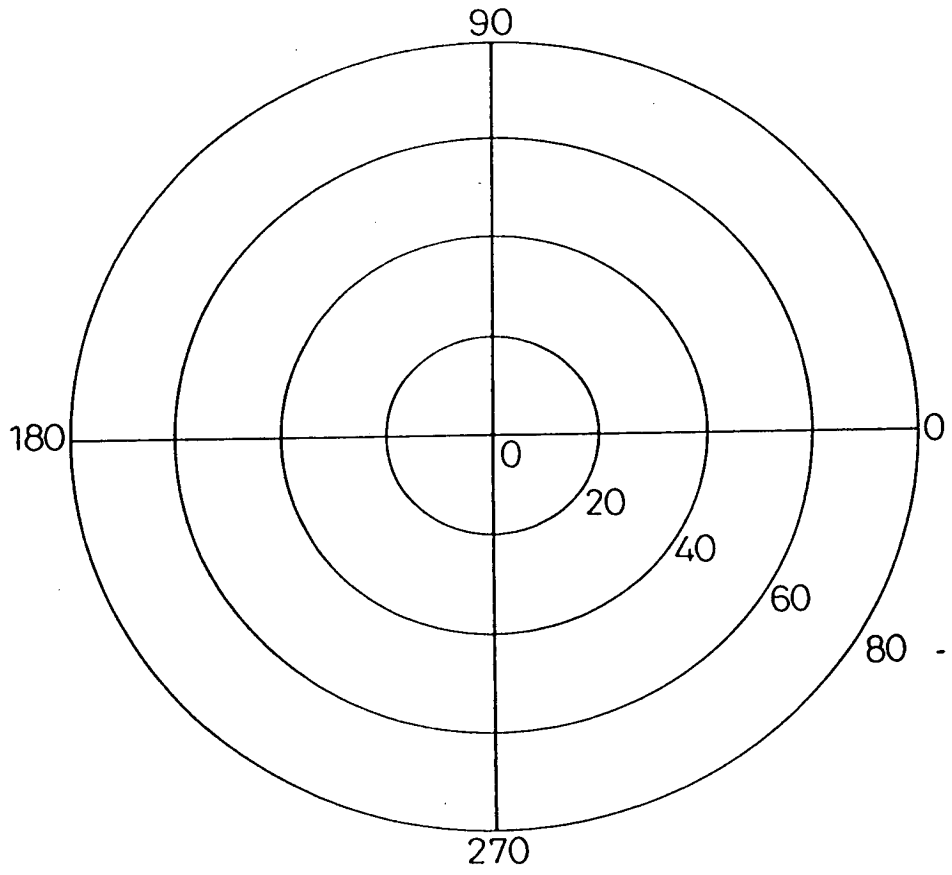


Fig.220

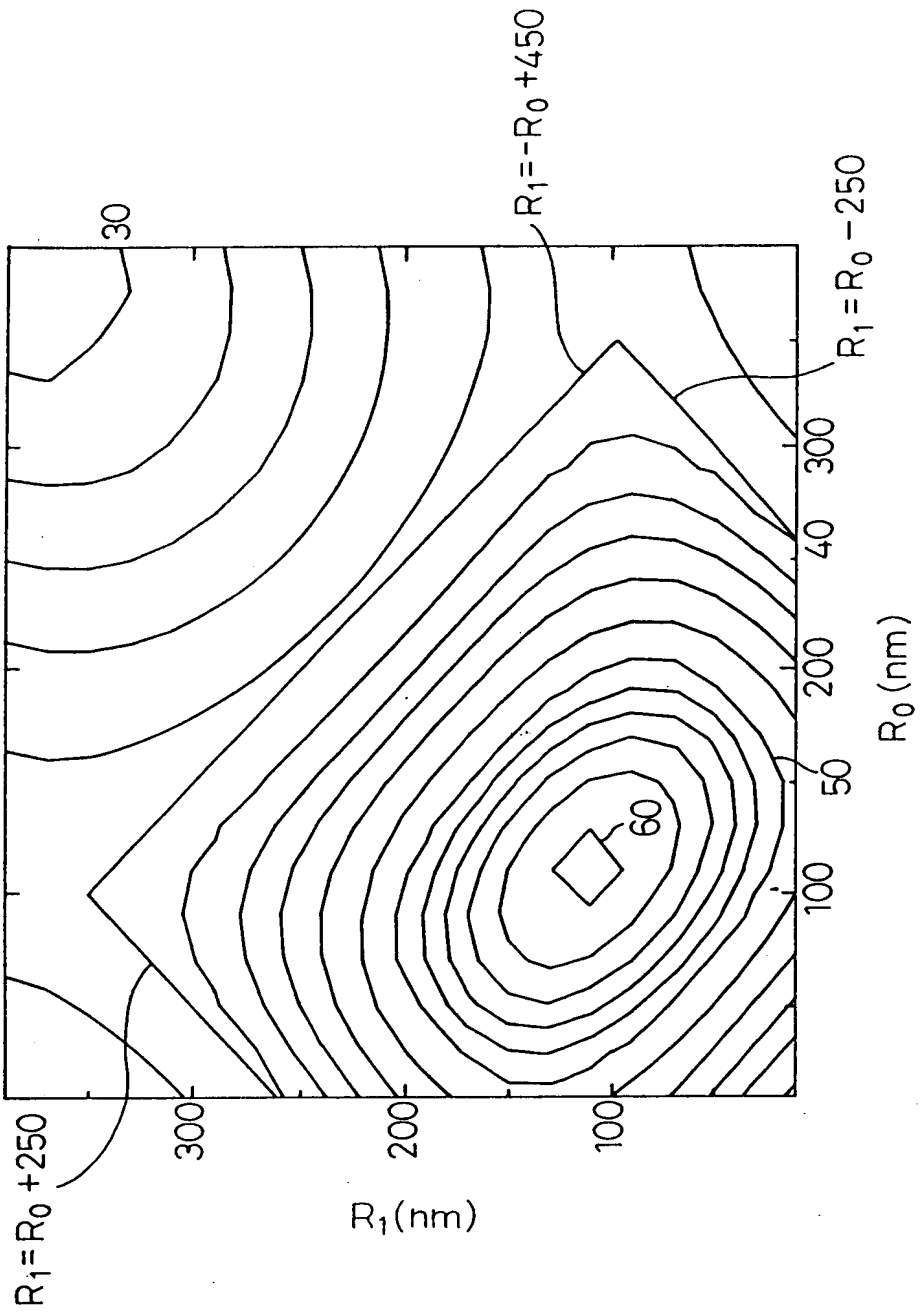

$R_1=-R_0+450$
$R_1=R_0-250$
$R_1=R_0+250$
30
30
300
200
100
R_1(nm)
300
40
200
50
100
60
R_0(nm)

Fig. 221

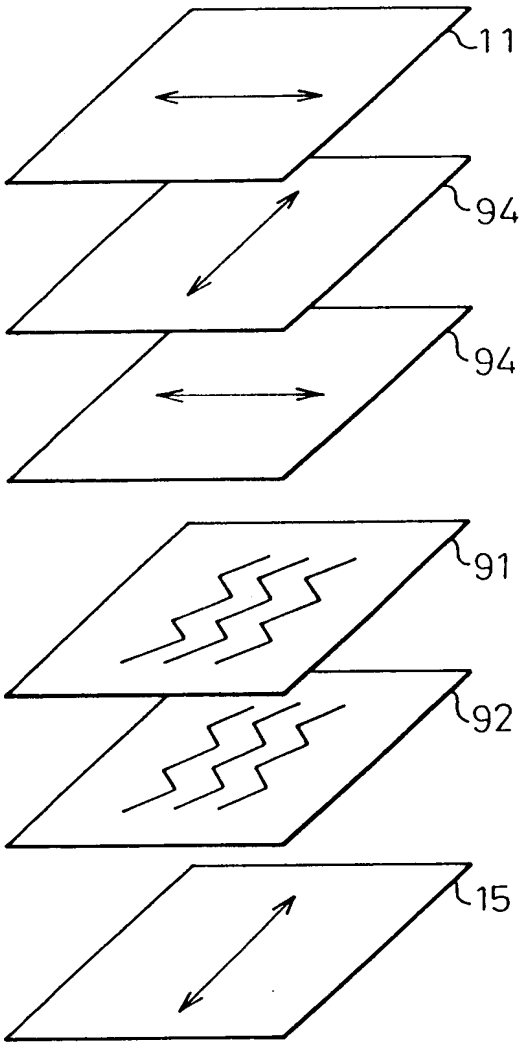


Fig. 222

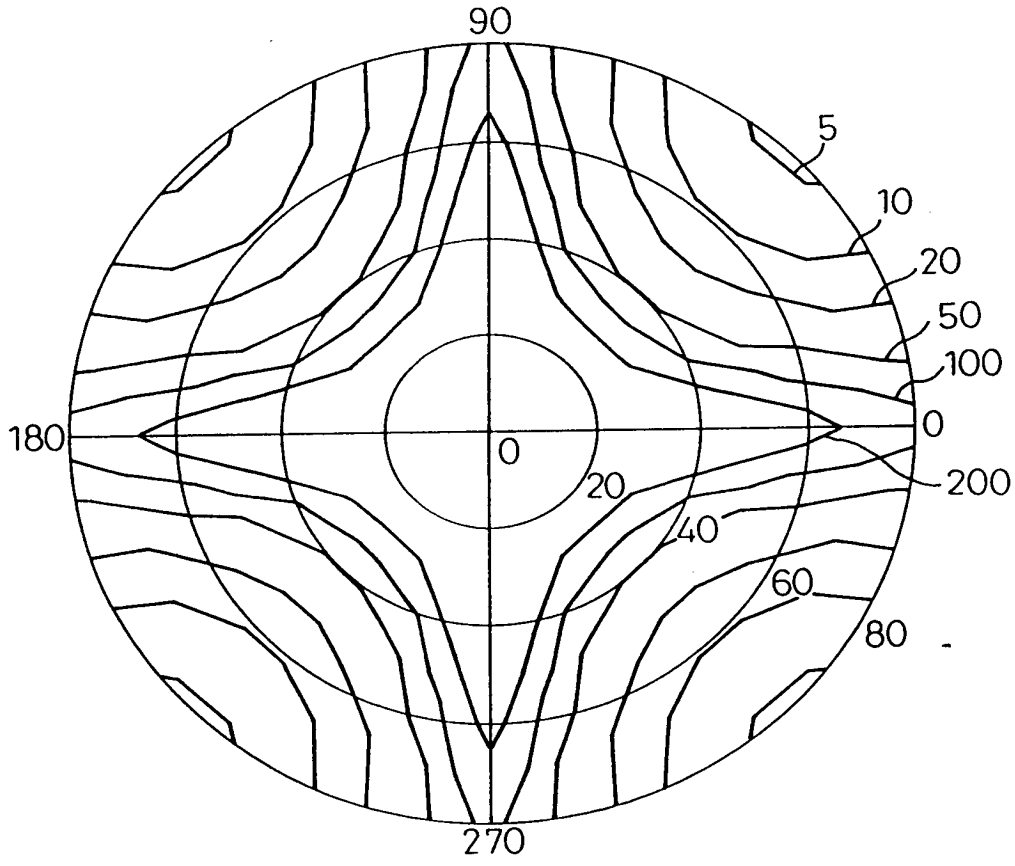


Fig. 223

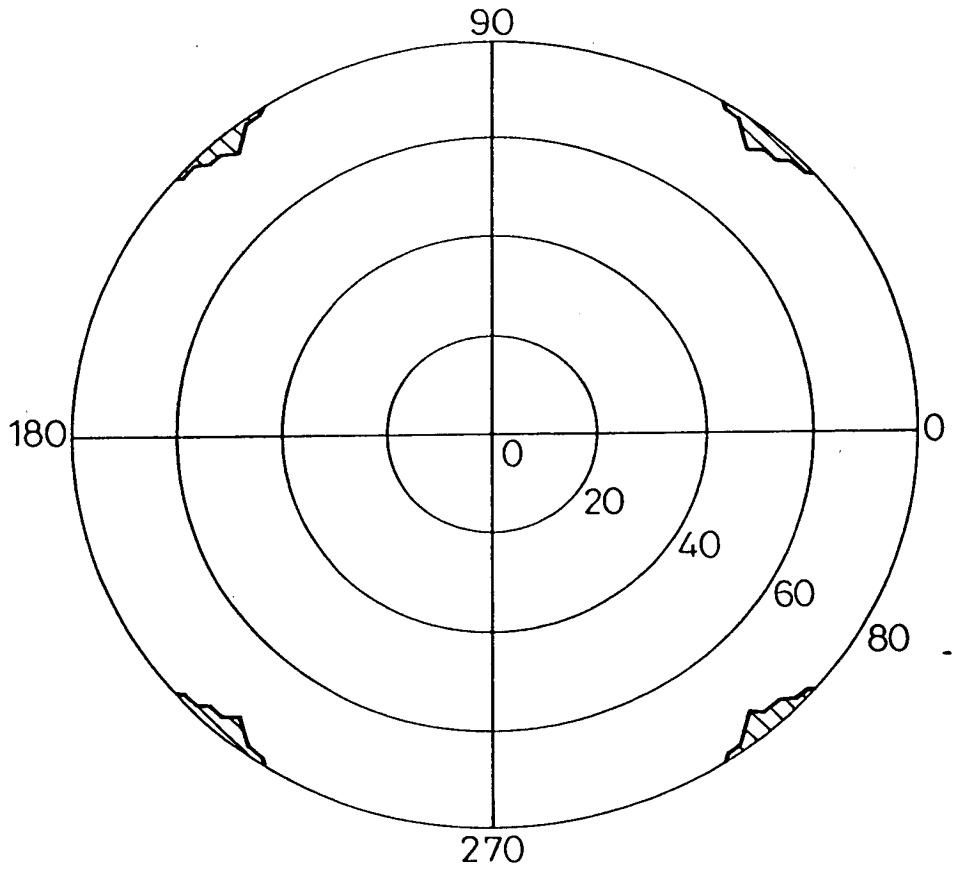


Fig. 224

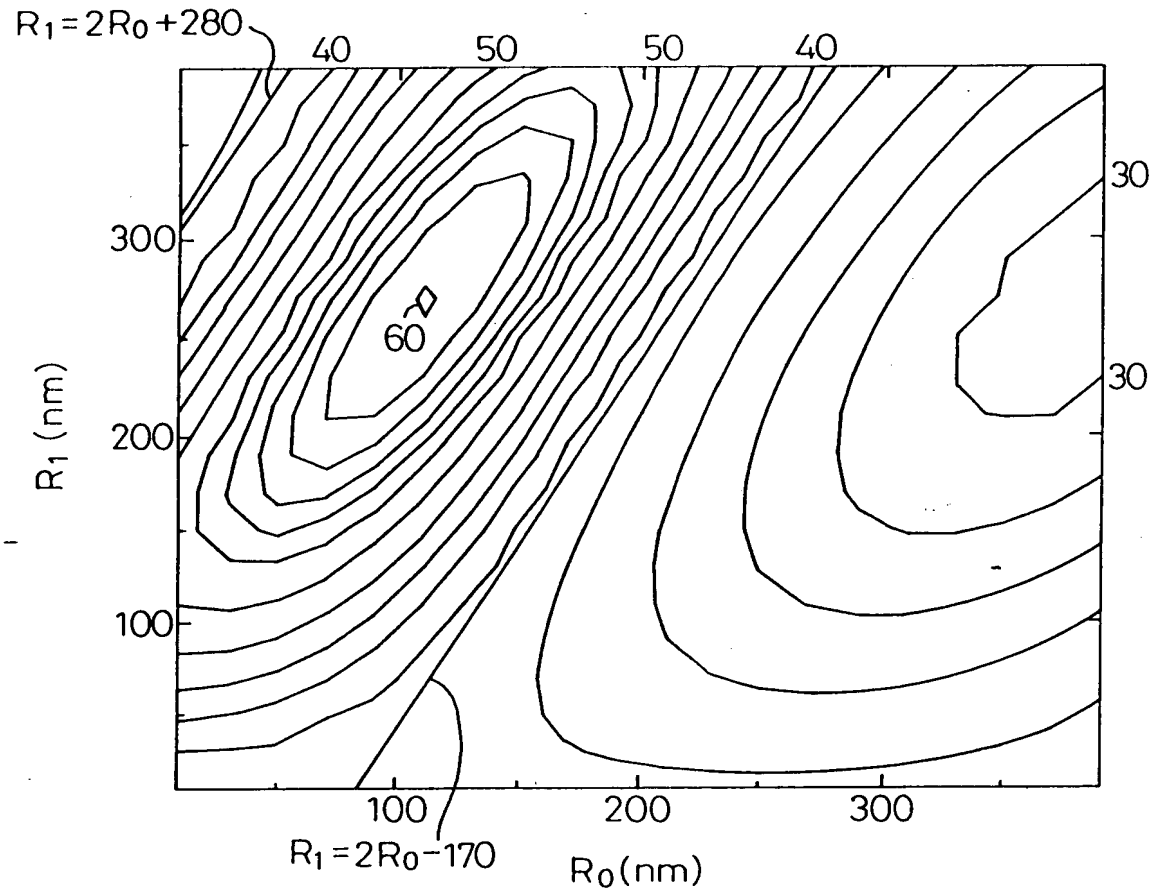

R1 = 2R0 + 280
40
50
50
40
30
30
300
200
100
60
R1 (nm)
100
200
300
R1 = 2R0 − 170
R0 (nm)

Fig. 225

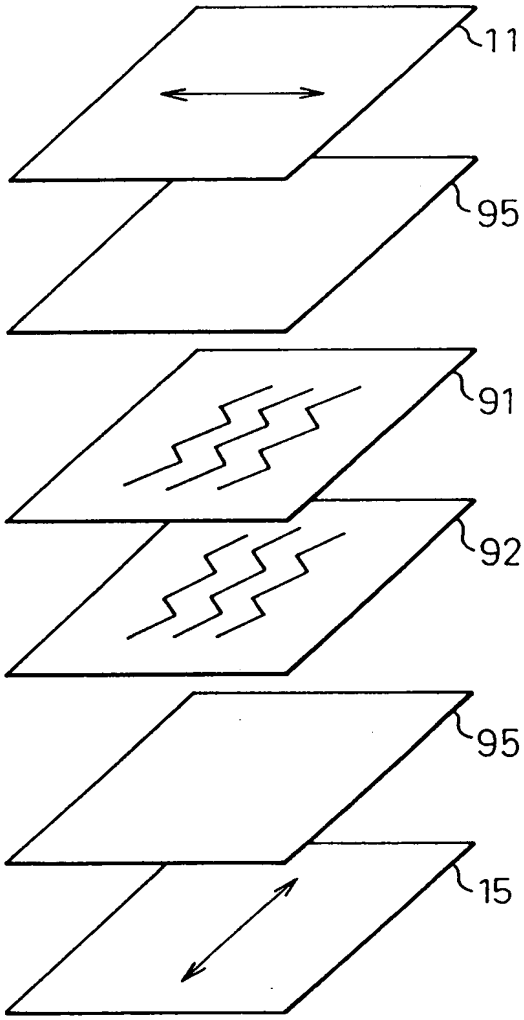


Fig. 226

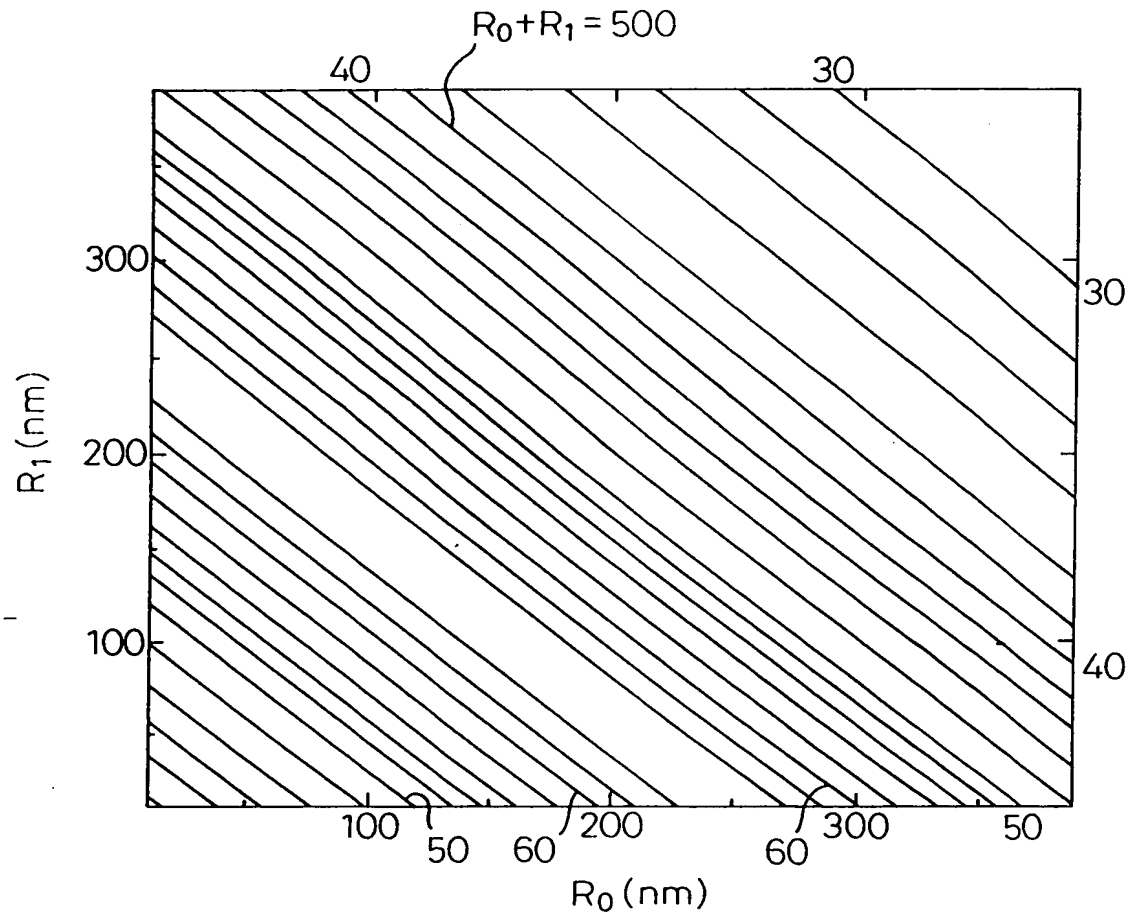


Fig.227

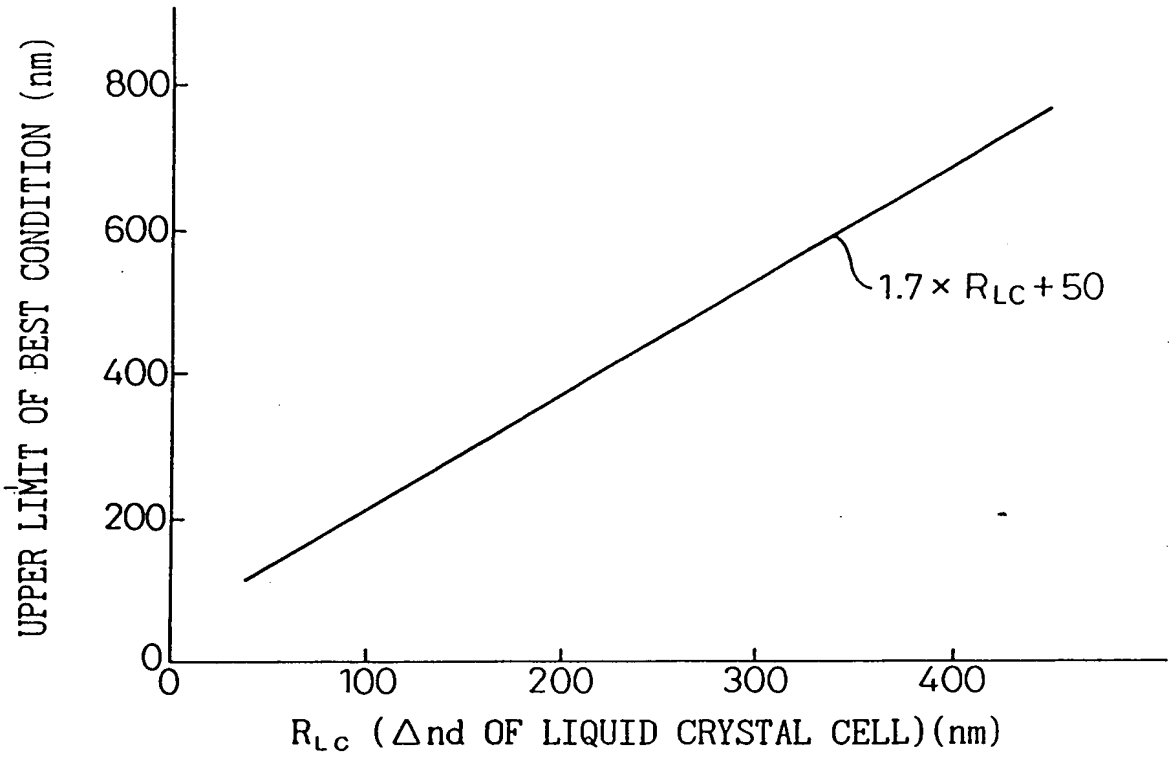

UPPER LIMIT OF BEST CONDITION (nm)
800
600
400
200
0
0
100
200
300
400
1.7 × R_LC + 50
R_LC (Δnd OF LIQUID CRYSTAL CELL)(nm)

Fig.228

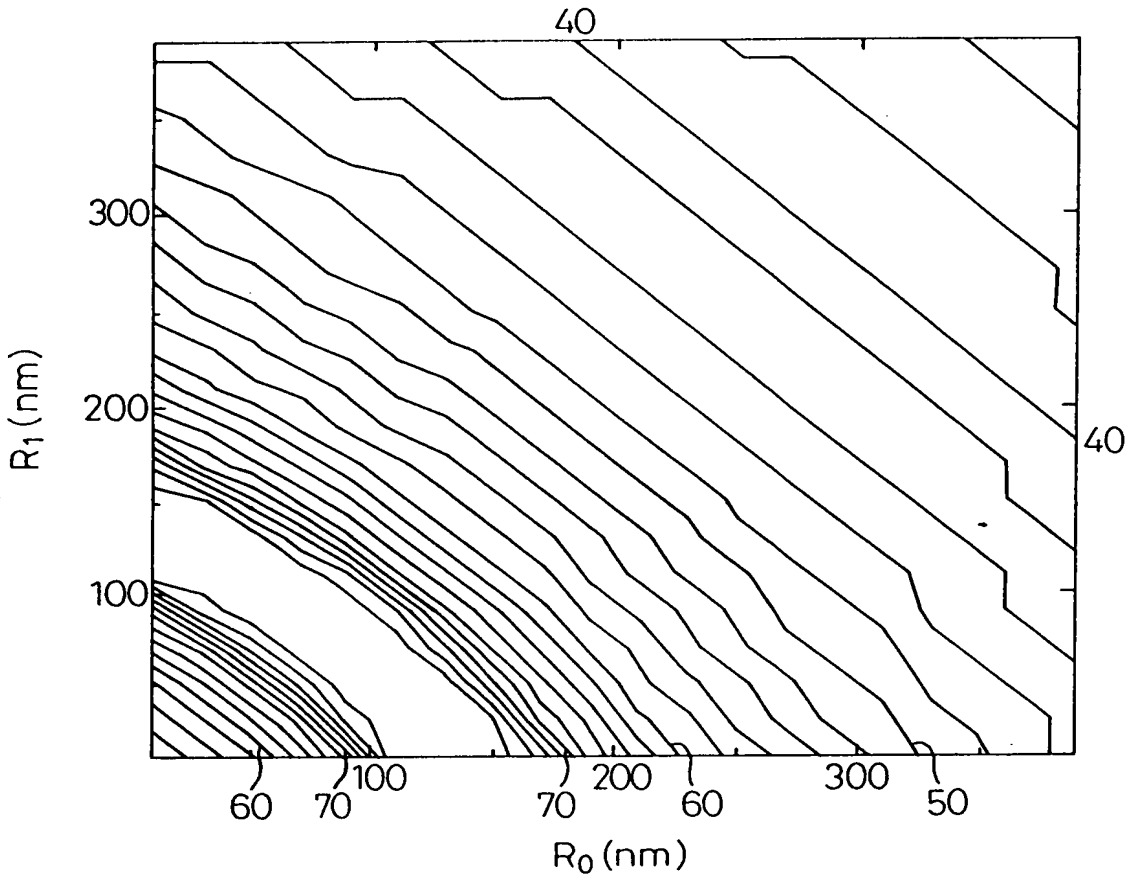


Fig. 229

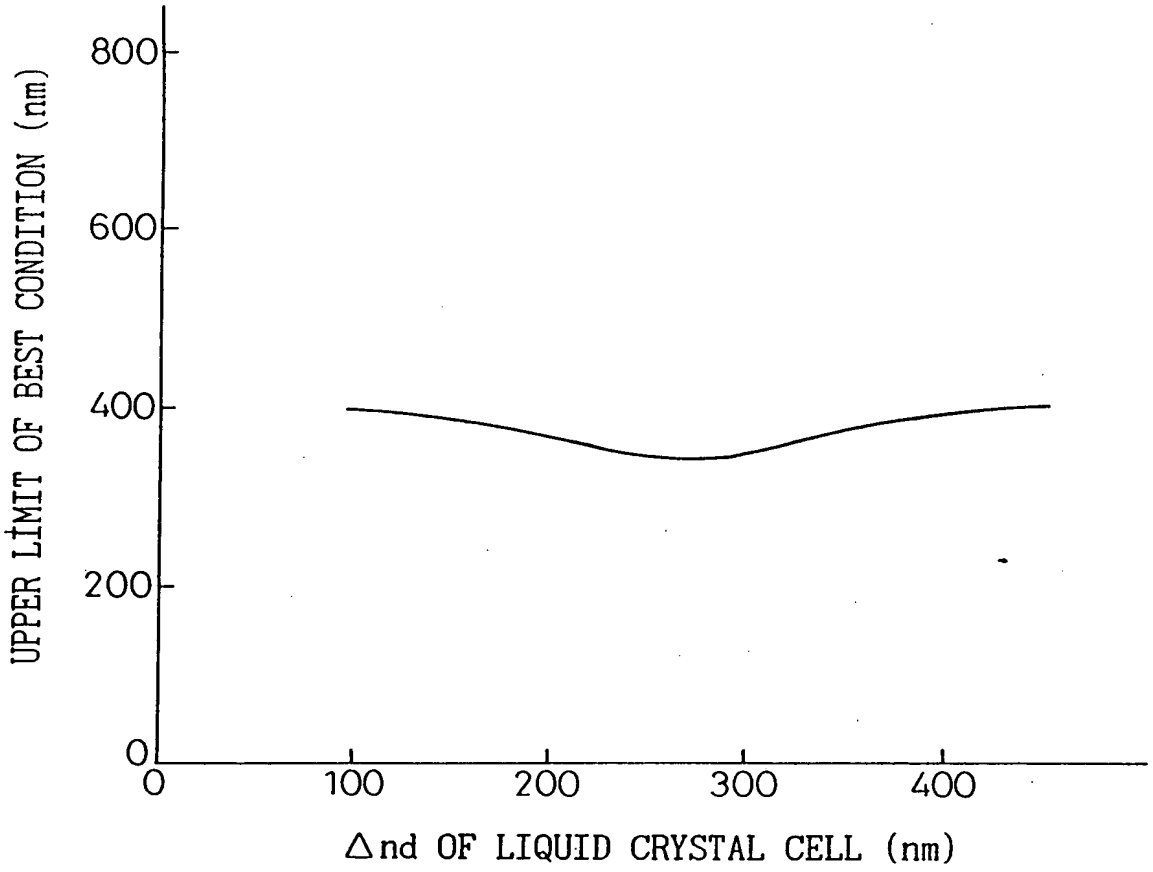

UPPER LIMIT OF BEST CONDITION (nm)
800
600
400
200
0
0
100
200
300
400
Δnd OF LIQUID CRYSTAL CELL (nm)

Fig.230

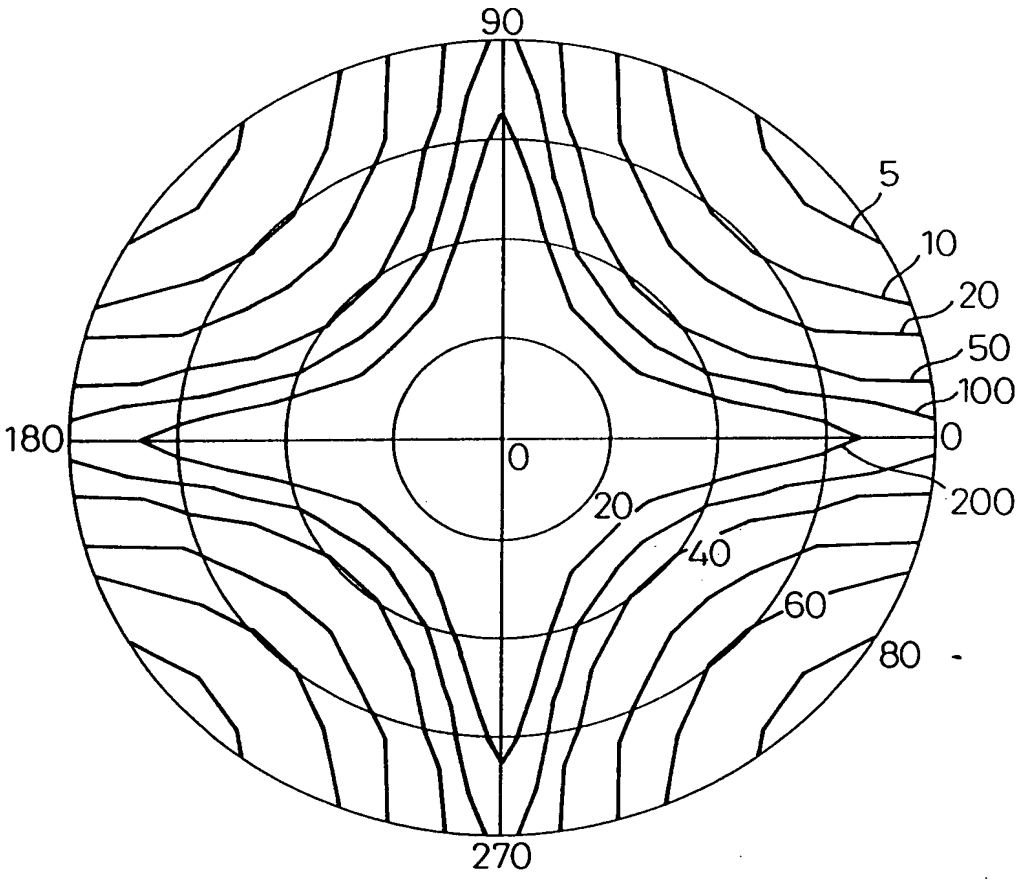


Fig. 231

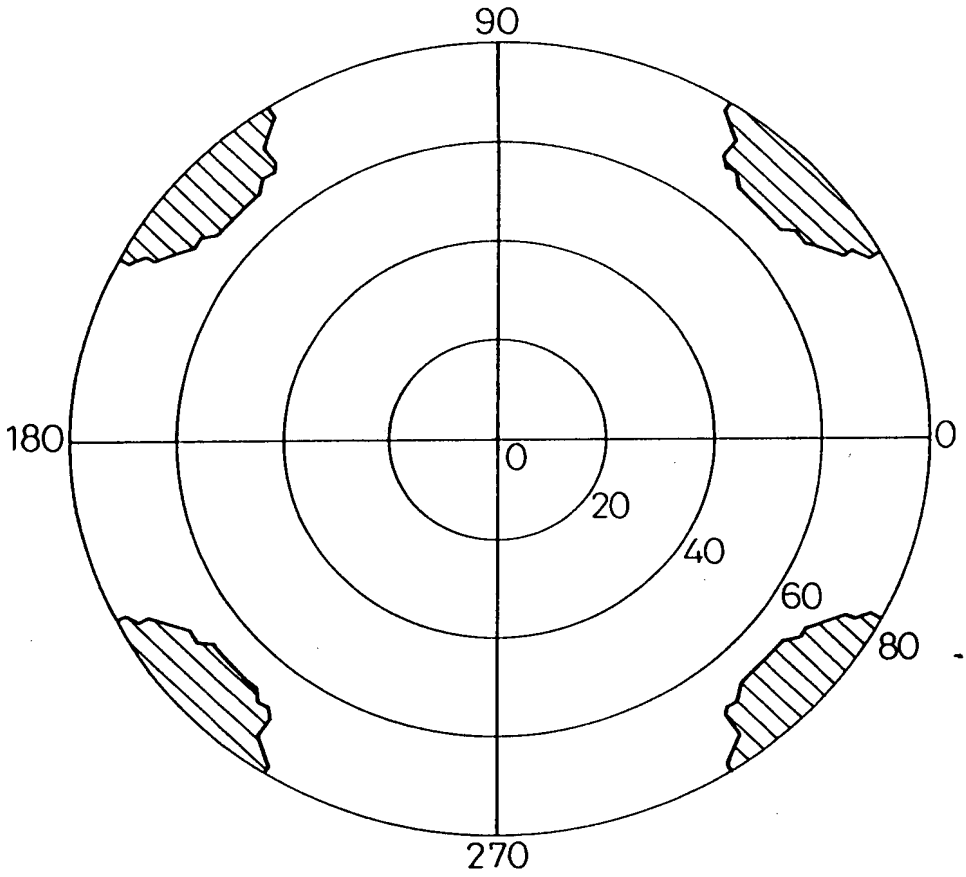


Fig. 232

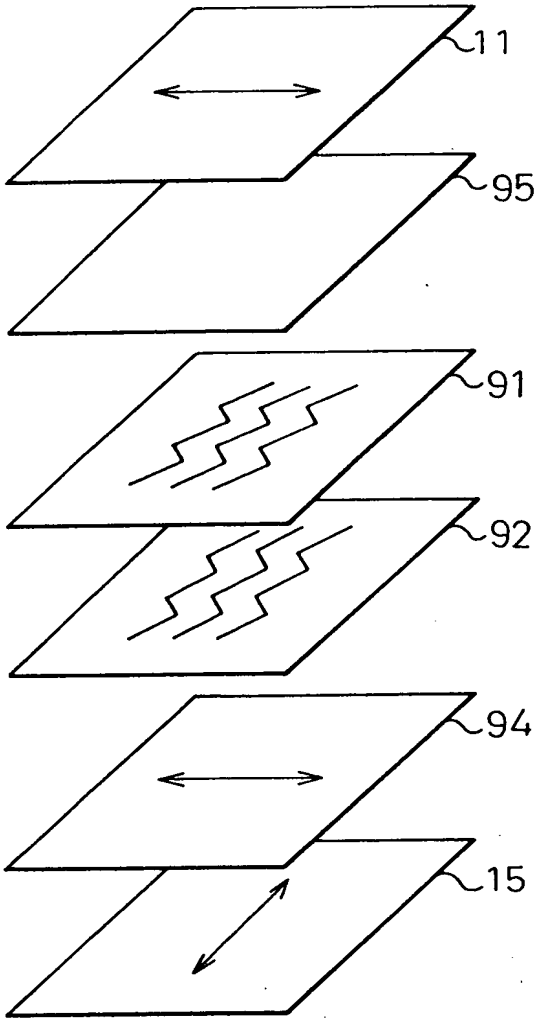


Fig. 233

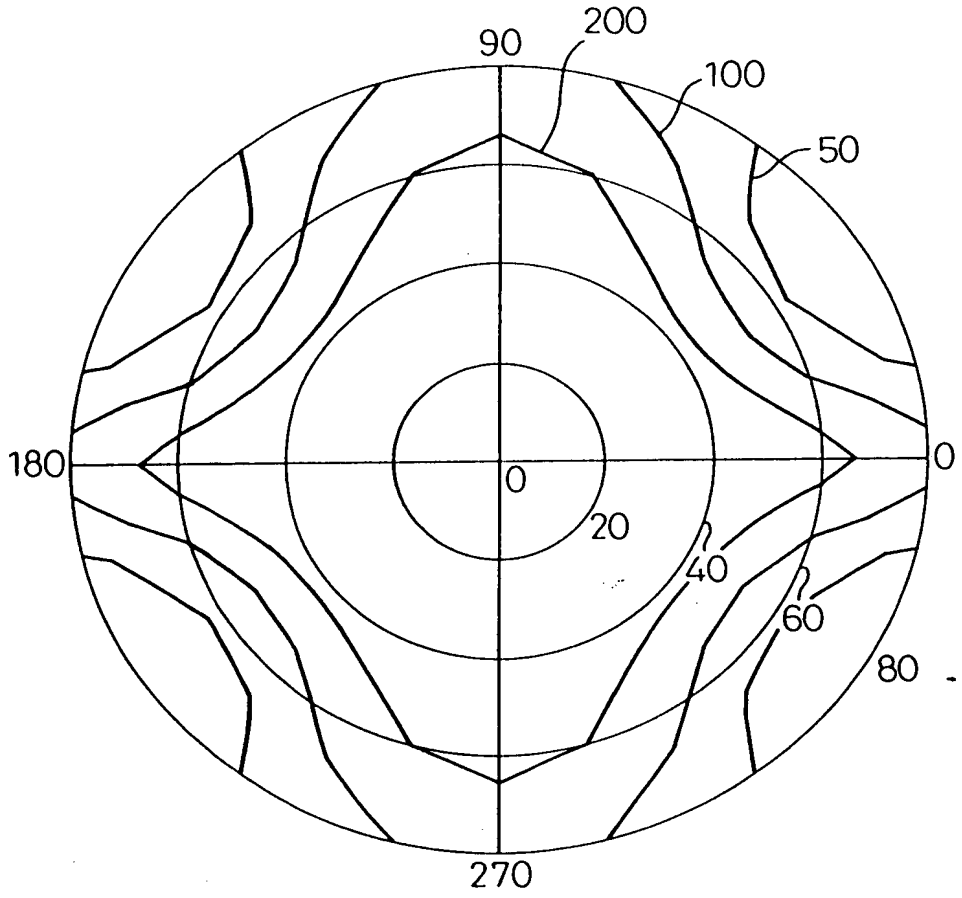


Fig. 234

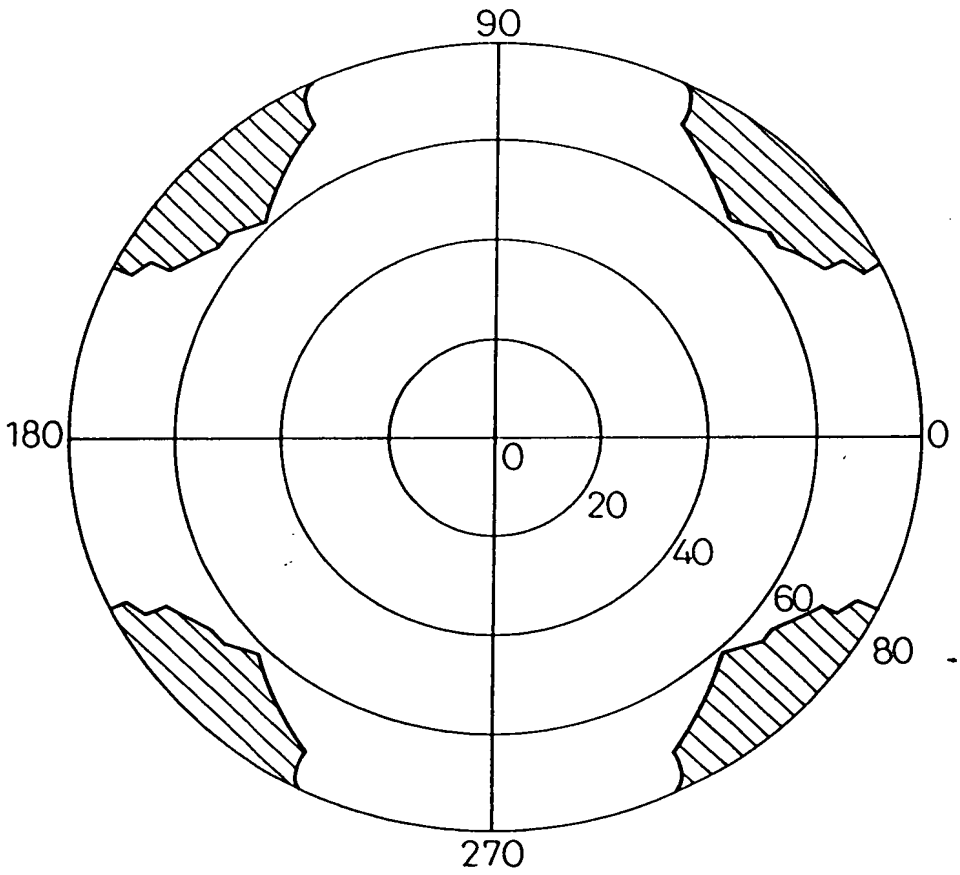


Fig. 235

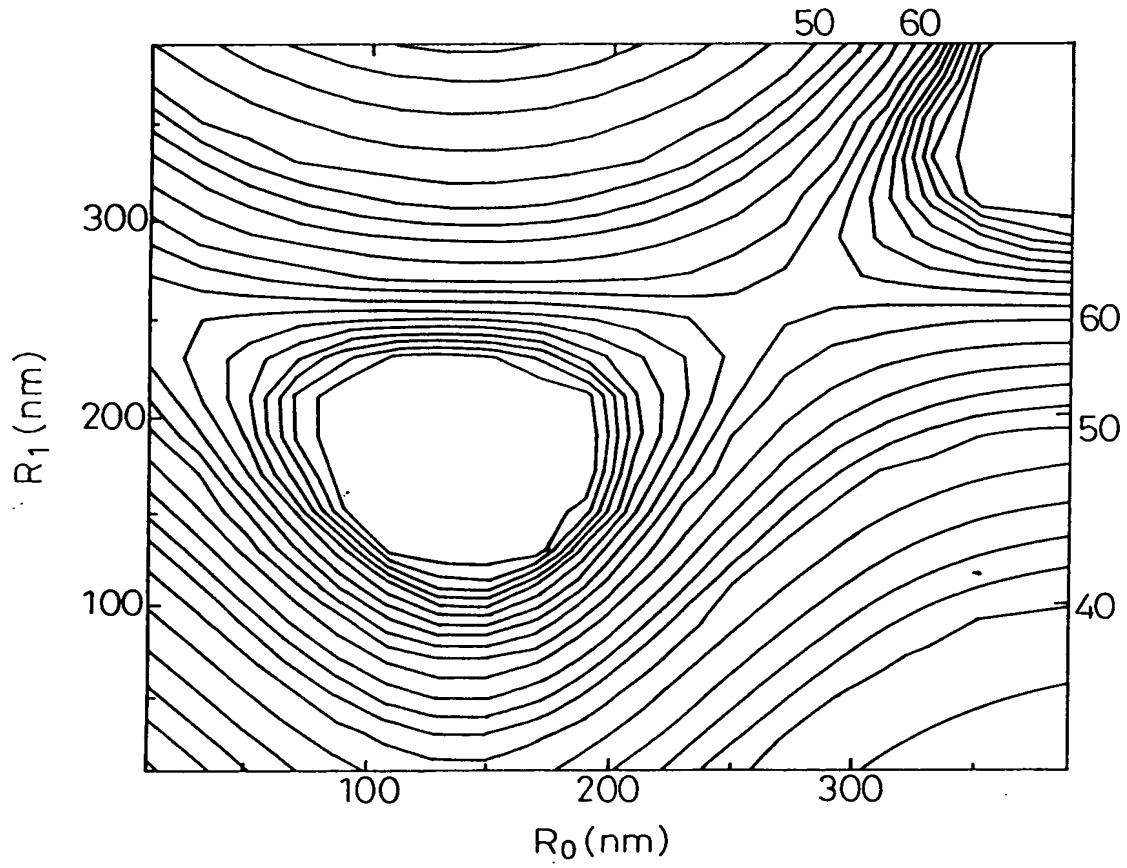


Fig.236

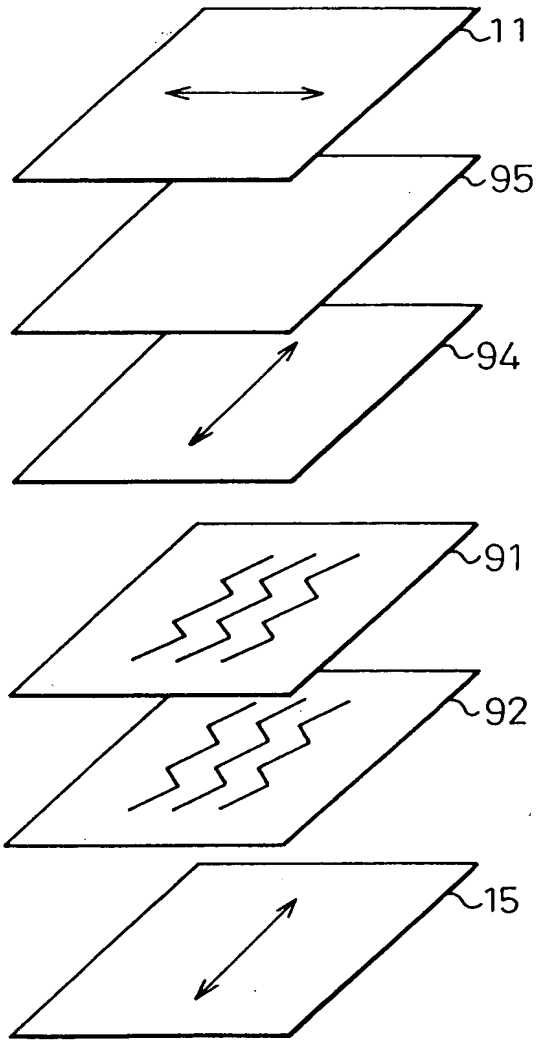


Fig. 237

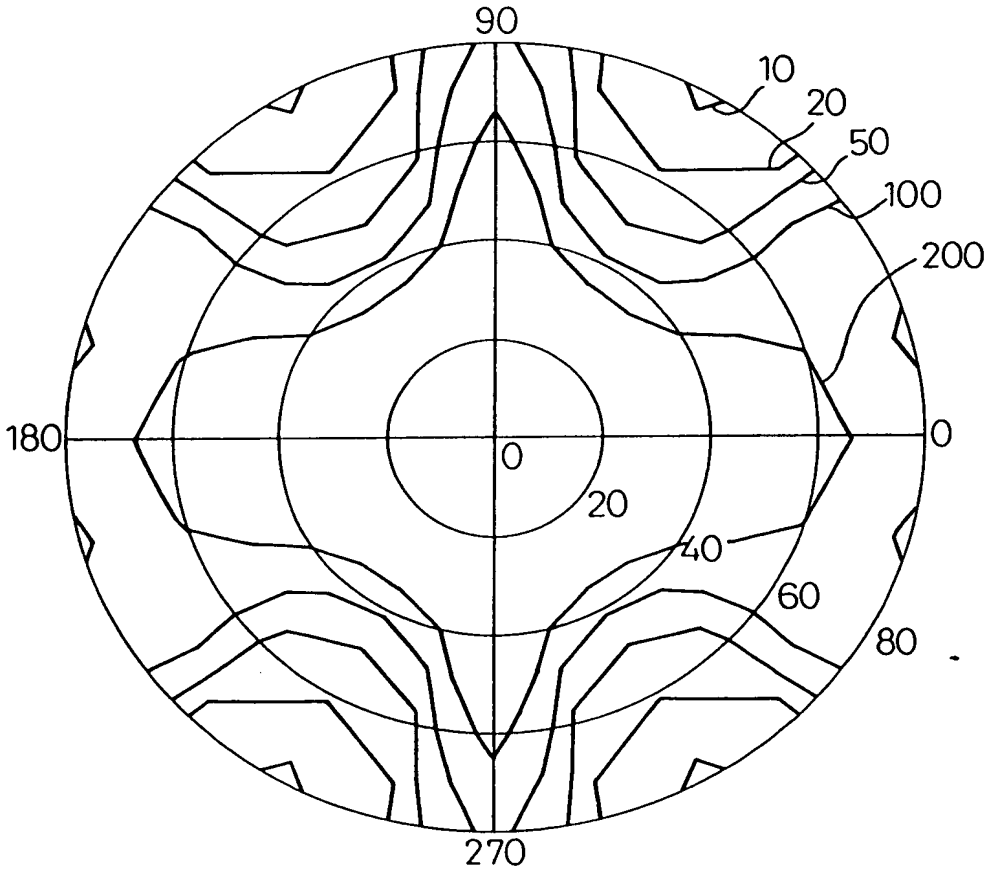


Fig.238

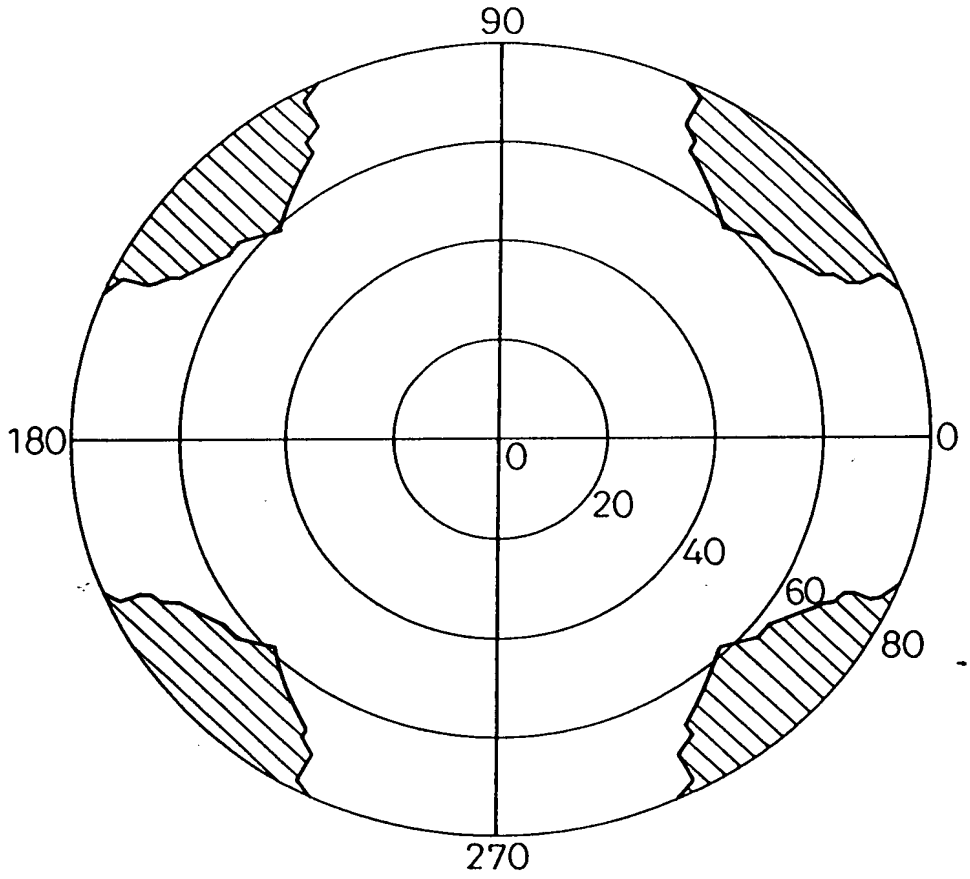


Fig. 239

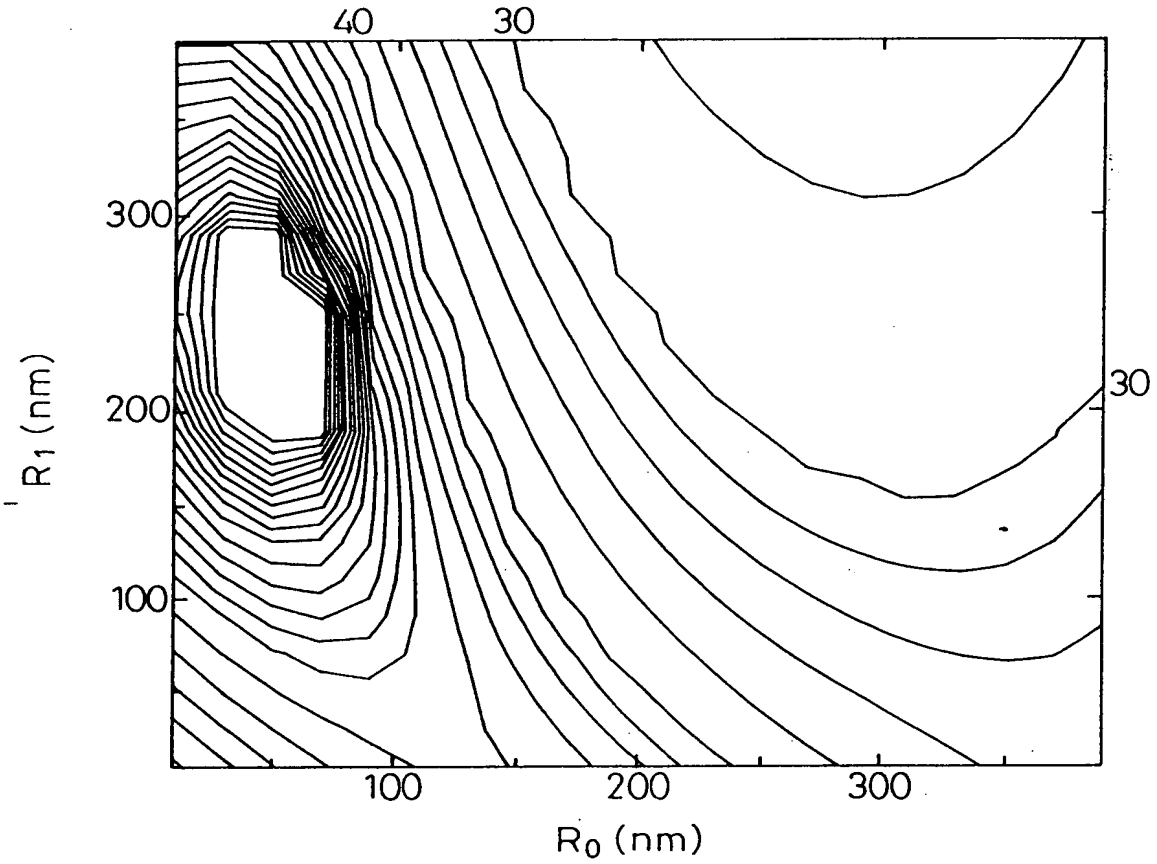


Fig. 240

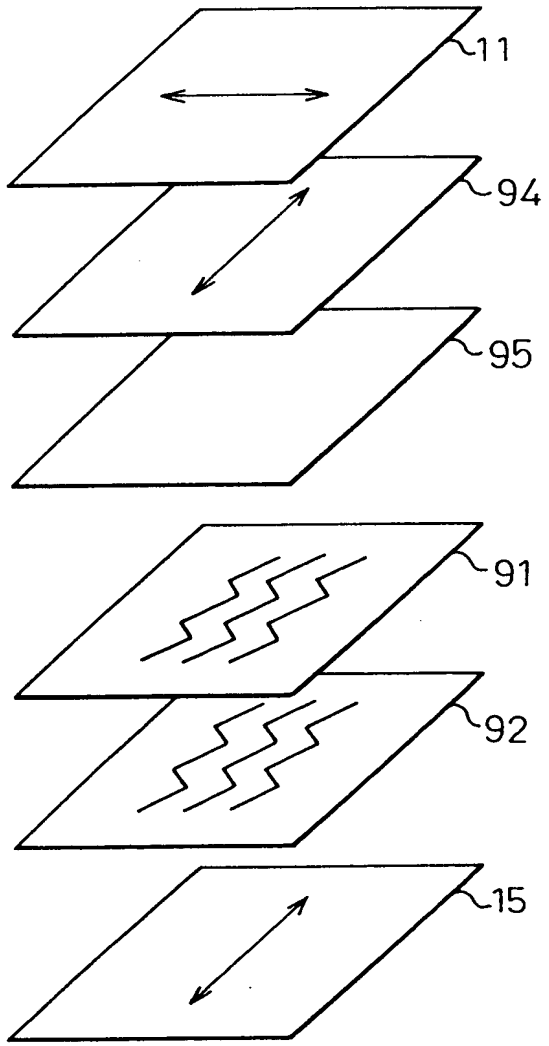


Fig. 241

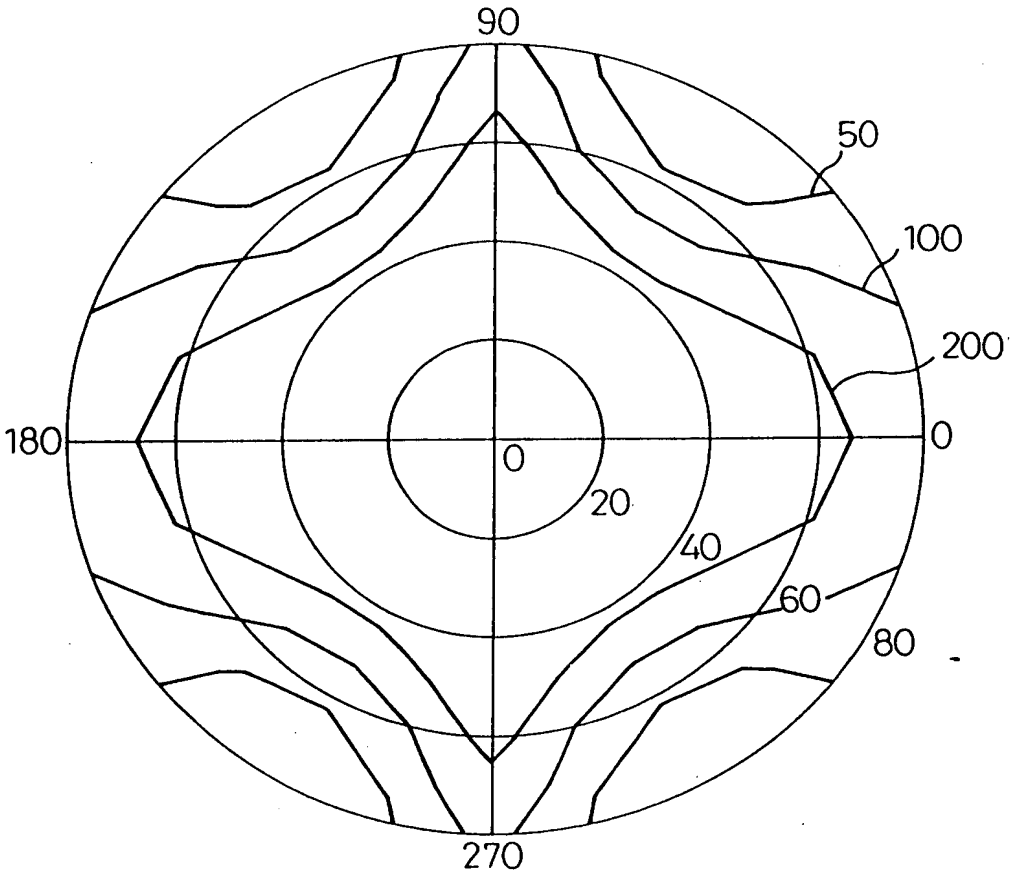


Fig. 242

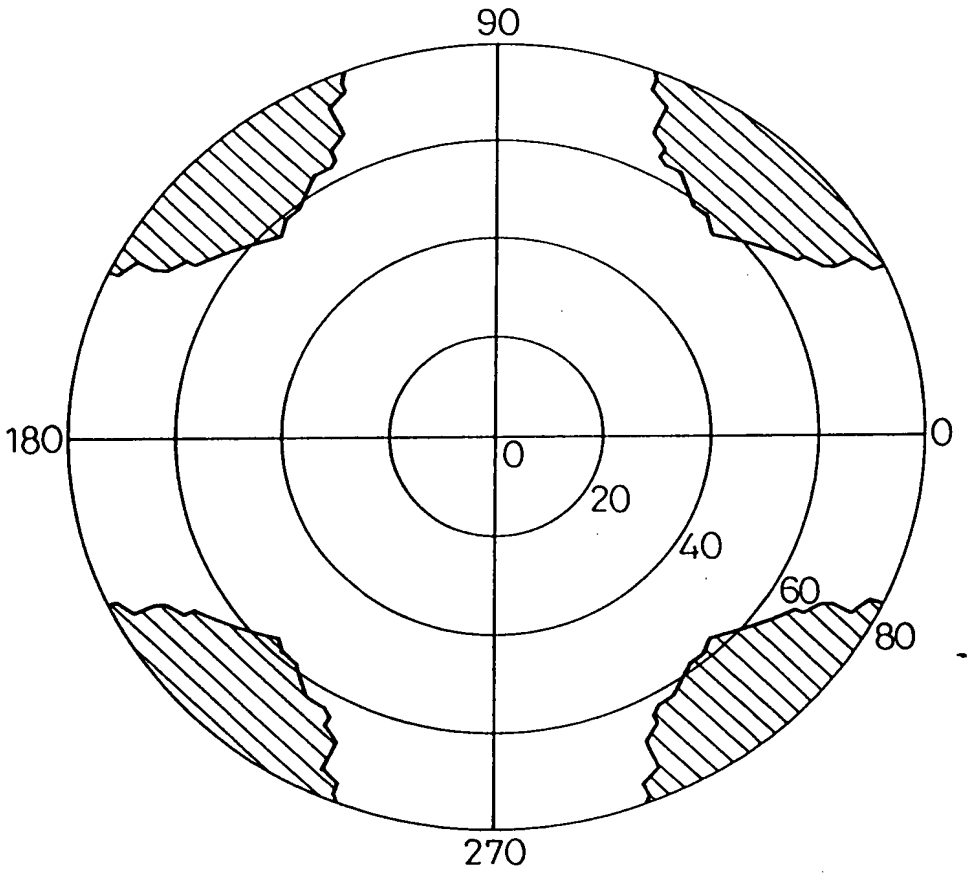


Fig .243

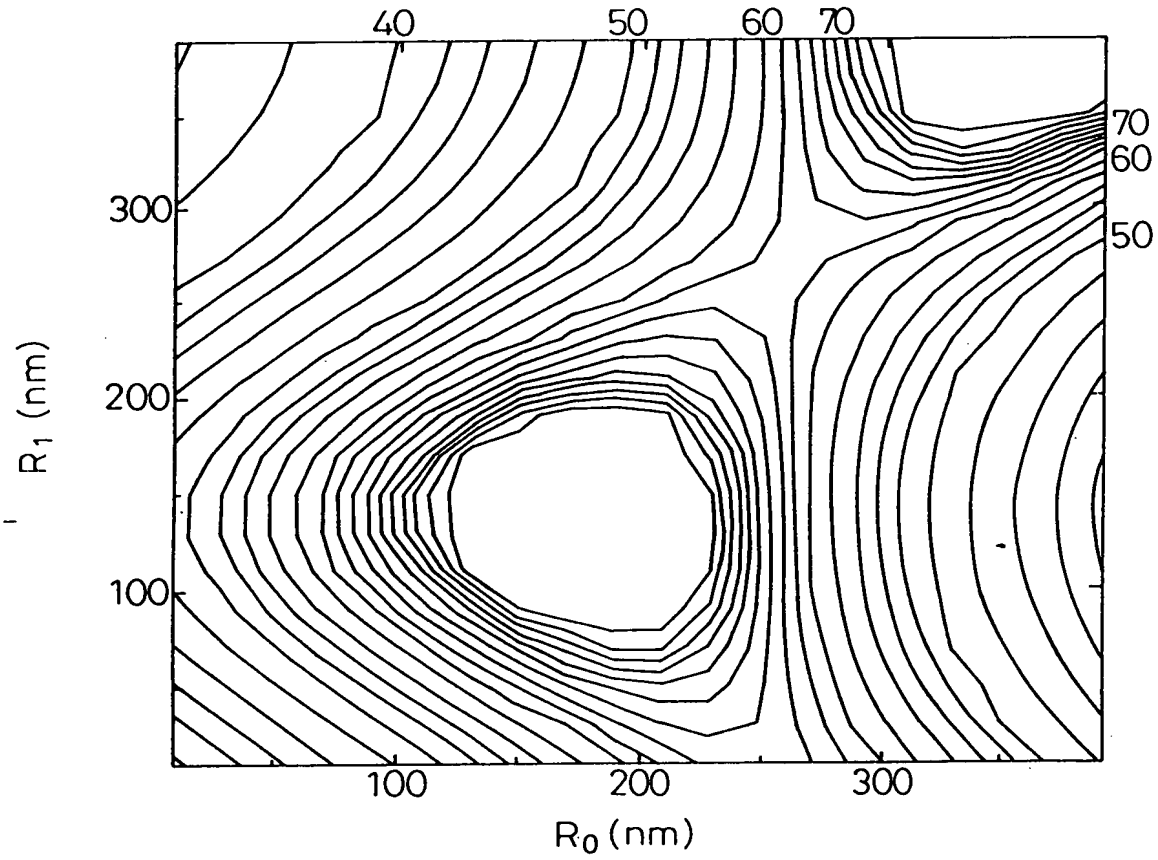


Fig. 244

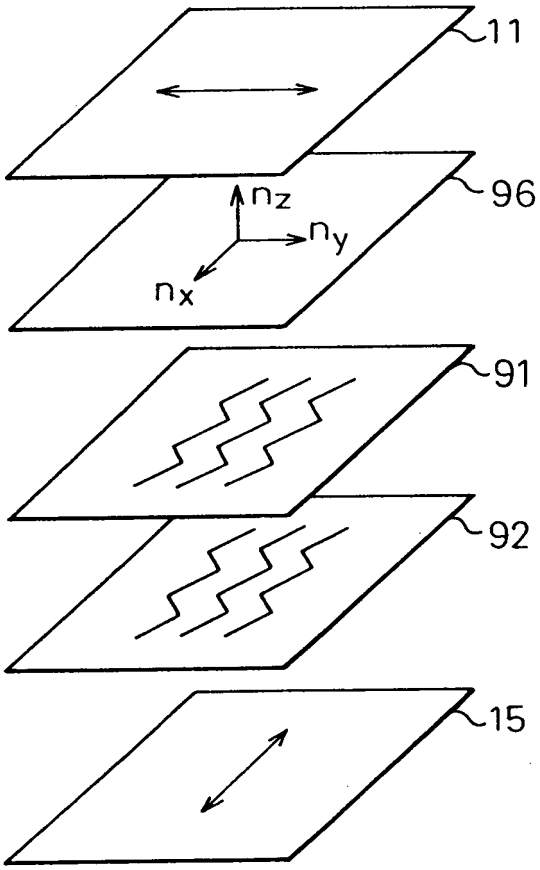


Fig.245

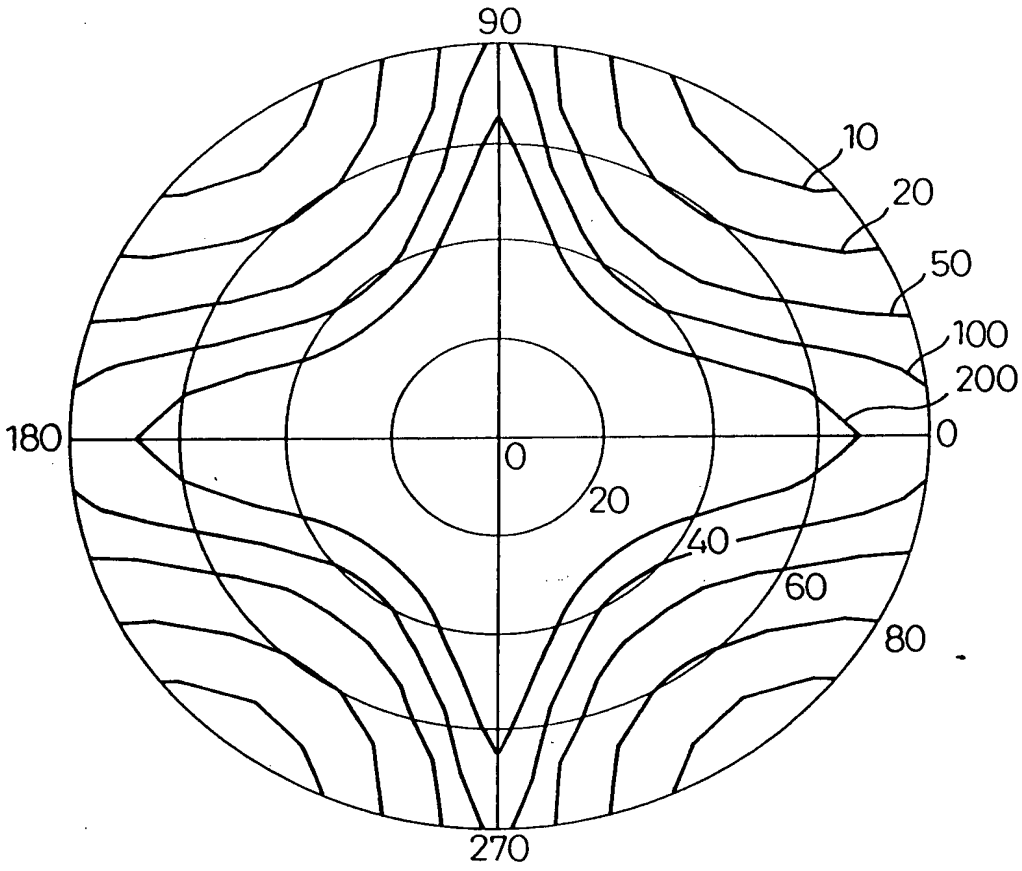


Fig. 246

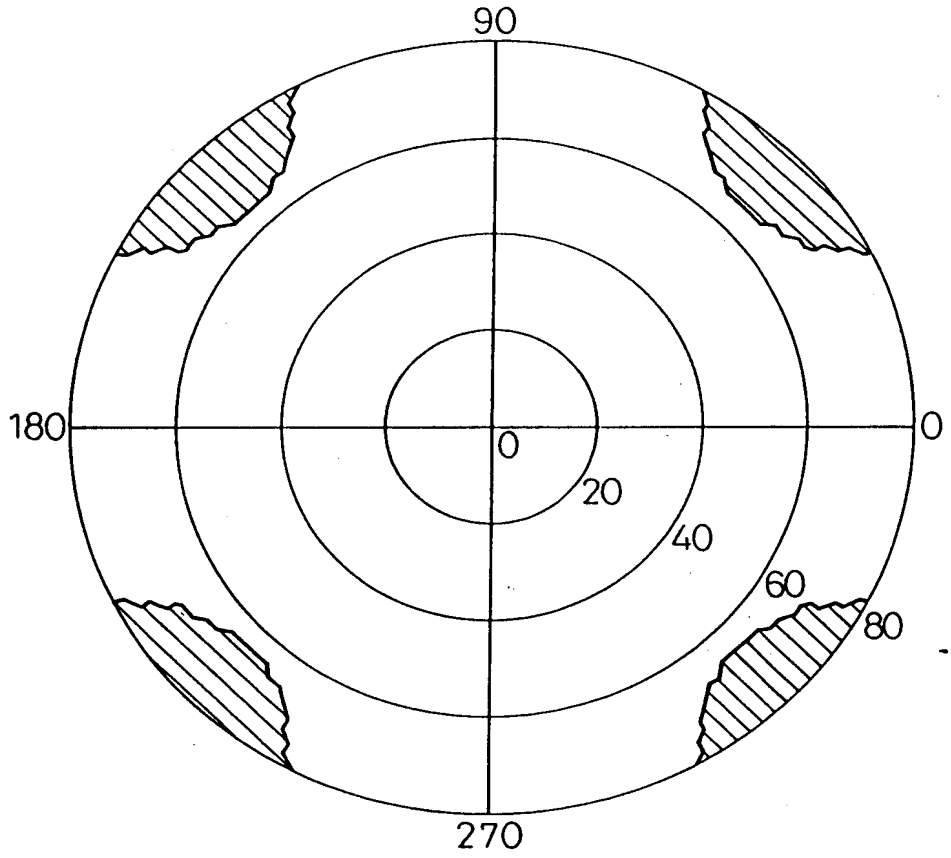


Fig. 247

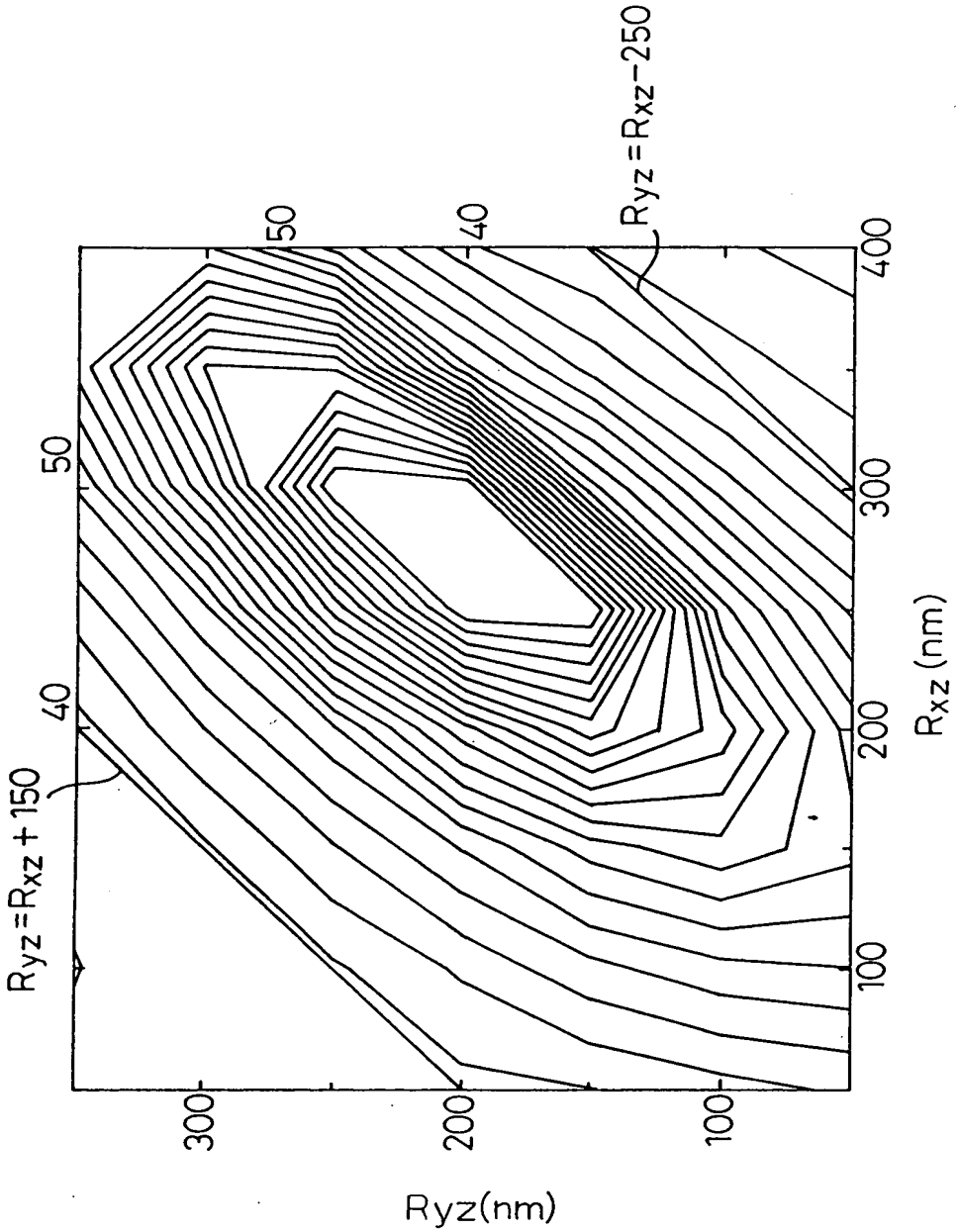

Ryz=Rxz+150
Ryz=Rxz−250
50
40
300
200
100
400
300
200
100
Ryz(nm)
Rxz(nm)

Fig. 248

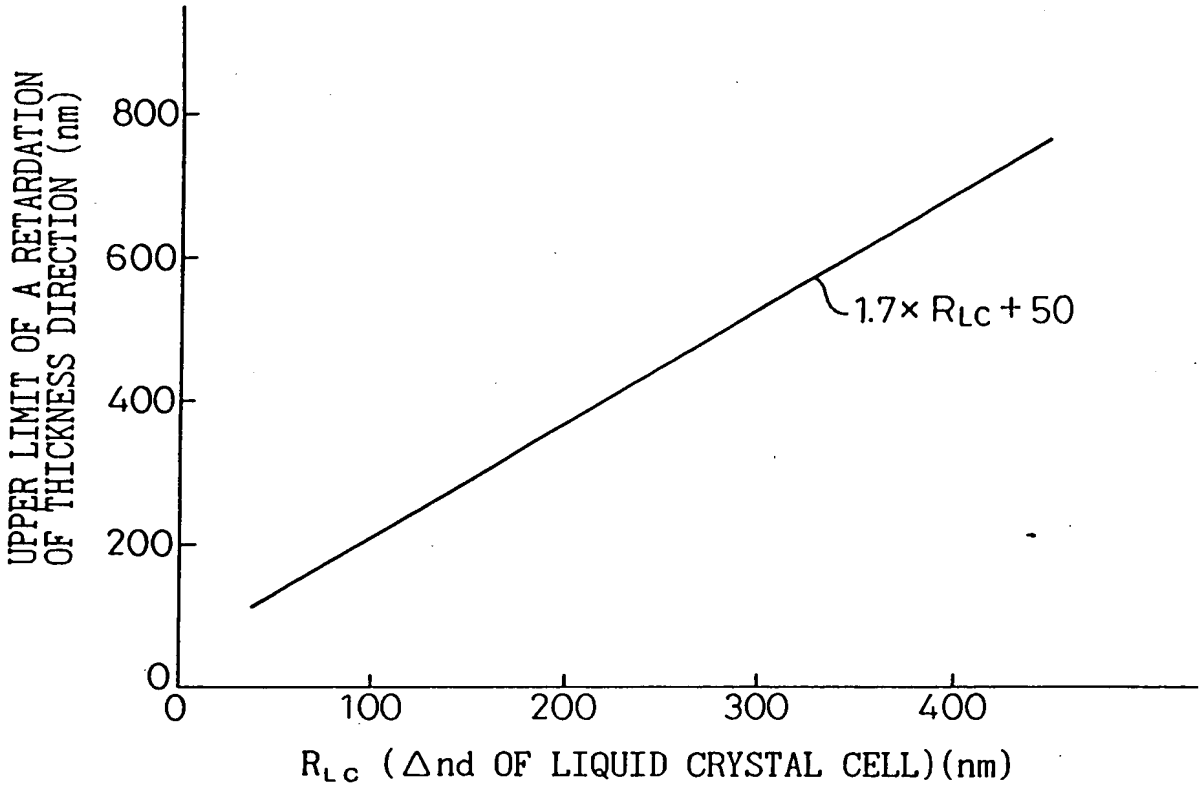

UPPER LIMIT OF A RETARDATION OF THICKNESS DIRECTION (nm)
800
600
400
200
0
0
100
200
300
400
1.7× RLC + 50
RLC (Δnd OF LIQUID CRYSTAL CELL)(nm)

Fig. 249

SAMPLE	THICKNESS OF A PANEL (μm) R G B	GAP BETWEEN PROJECTIONS (μm) R G B	PHASE DIFFERENCE FILM Rd VALUE (nm)	TRANS-MITTANCE % (5v)	VIEW ANGLE : CR > 10 LEFT-RIGHT DIRECTION	COLOR DIFFERENCE (5v: LEFT -RIGHT) Δu(x)	Δv(Y)
EMBODIMENT A	5.7, 4.6, 3.6	20, 25, 30	320	5.60	±80°	0.03	0.03
EMBODIMENT B	5.7, 4.6, 3.6	20, 25, 30	320	5.60	±80°	0.03	0.05
PRIOR ART 1	R,G,B=3.6	R,G,B=30	240	4.50	±80°	0.06	0.05
PRIOR ART 2	R,G,B=4.6	R,G,B=30	320	5.80	±80°	0.14	0.12

Fig. 250

EXAMPLES	INITIAL VALUES	AFTER 200 HOURS
EMBODIMENT C	25	42
EMBODIMENT D	33	51
EMBODIMENT E	26	45
EMBODIMENT F	30	48
REFERENCE	32	70

Fig.251A

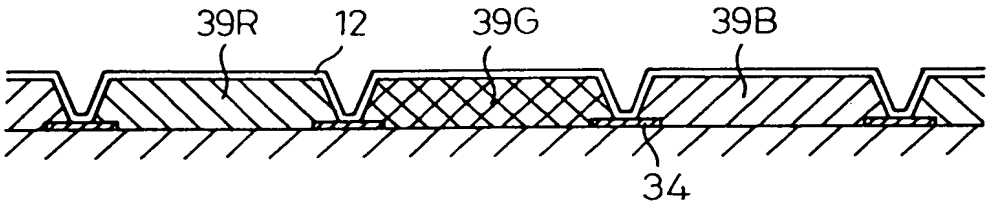


Fig.251B

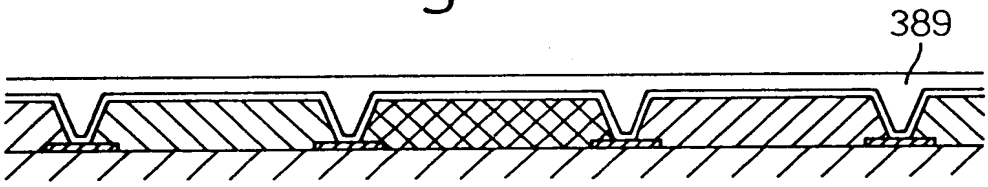


Fig.251C

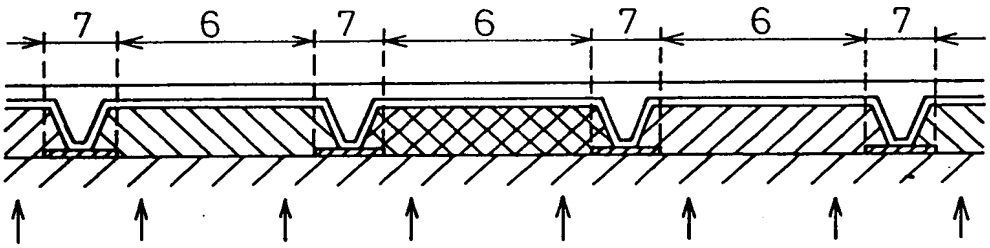


Fig.251D

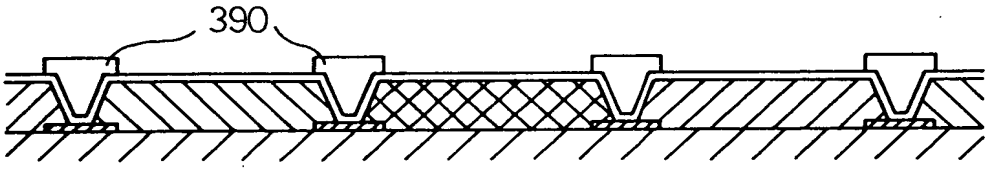


Fig.252A

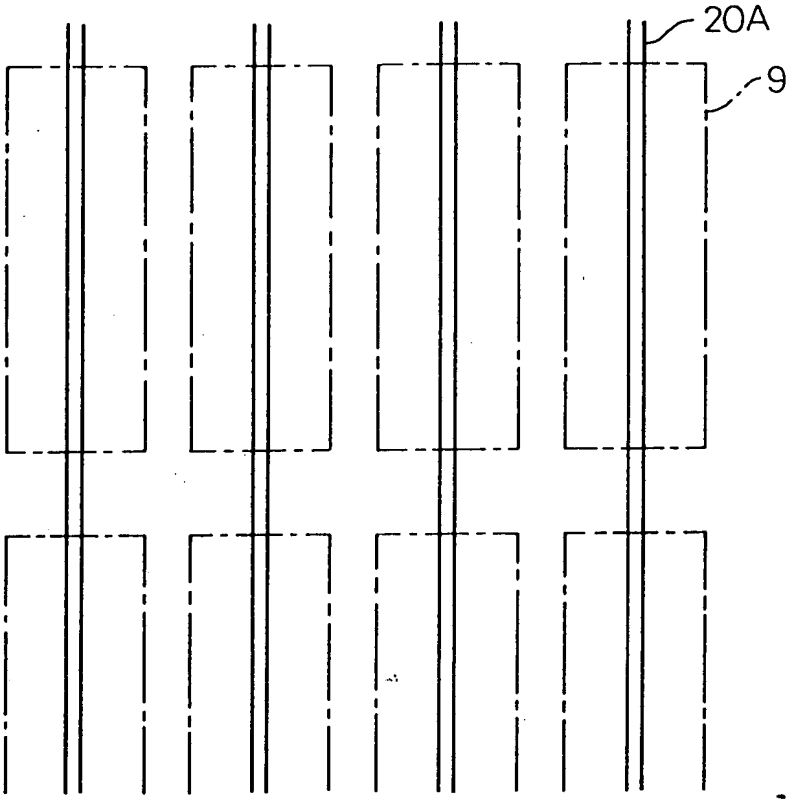


Fig.252B

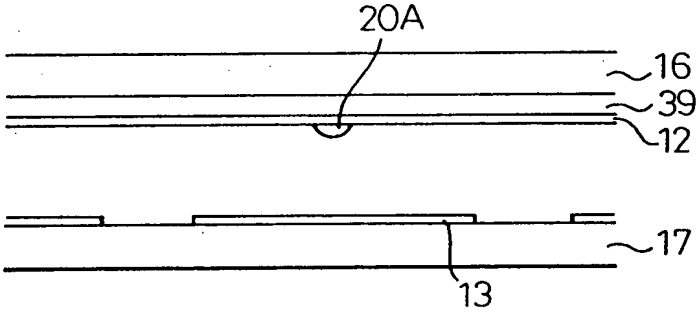


Fig. 253

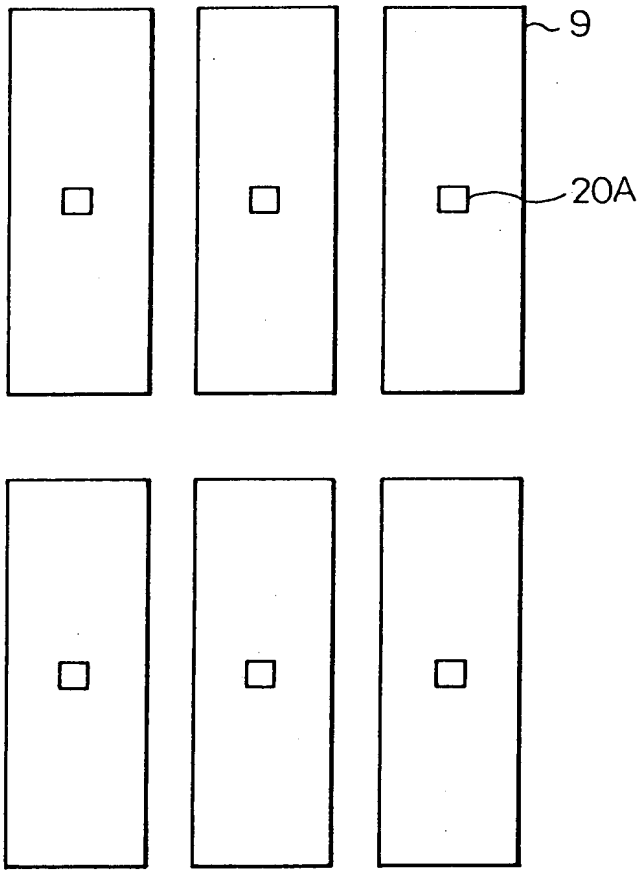


Fig. 254A

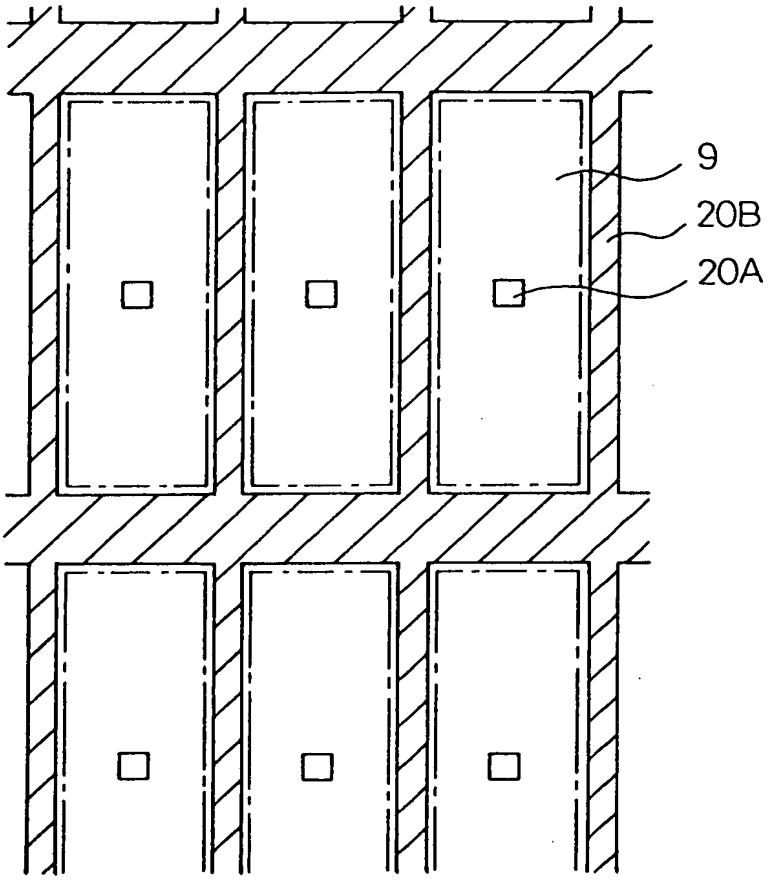


Fig. 254B

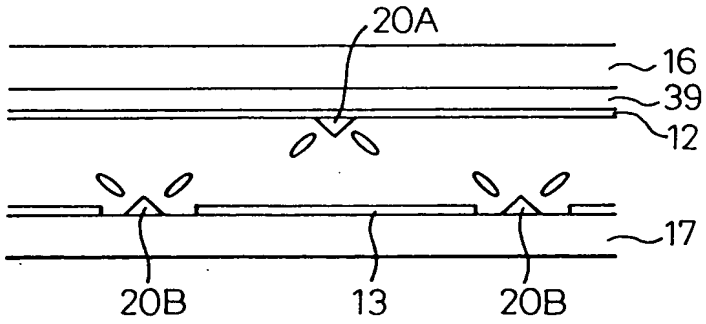


Fig. 255